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ABSTRACT

This study examined Anchorage School District (Alaska) kindergarten classes from 1987-88, 1988-89, and 1989-90; these years correspond to the last year in which there was no full-day kindergarten program in the district, and the first and second years of the district's full-day program. The study examined matriculation patterns, special education identification, middle school and high school credits and grade point averages, and norm referenced test results for students from those kindergarten classes who moved through the District's schools through the 1997-98 school year. The purpose of the study was to identify long-term effects, if any, of the full-day kindergarten program in Anchorage. The findings indicated that Anchorage students had the opportunity for success regardless of the type of kindergarten program they attended, but that not all students were successful. Factors such as individual student initiative, home life, and educational opportunities after kindergarten influenced students' later educational career and successes more that the type of kindergarten program attended. Based on the findings, it was concluded that the full-day program has been implemented successfully, offers students an immediate pay-off in preparation for first grade, and relates to success in middle school. (Contains 18 references.) (Author/SD)

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# Anchorage School District

Anchorage, Alaska

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## Full-Day Kindergarten Study

## A Follow-up of the Kindergarten Classes of 1987-88, 1988-89, and 1989-90

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Ray Fenton

2A

Prepared by:

Frederick P. Stofflet, Ph.D.
Executive Director, Curriculum
& Evaluation

October 1998

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ANCHORAGE SCHOOL DISTRICT
ANCHORAGE, ALASKA

ASD MEMORANDUM #74 (98-99) October 26, 1998

TO: SCHOOL BOARD

FROM: OFFICE OF THE SUPERINTENDENT Bob Christal

SUBJECT: FULL-DAY KINDERGARTEN REPORT

PERTINENT FACTS:

Enclosed is a "follow-up" review of the entering Anchorage School District kindergarten classes from 1987-88, 1988-89, and 1989-90. These years correspond to the last year in which there was no Full-Day Kindergarten Program in the District, the first year of such a Program, and the second year of the Program.

The report examines matriculation patterns, special education identification, middle school and high school credits and grade point averages. and norm referenced test results for students from those kindergarten classes who moved through the District's schools through the 1997-98 school year. The purpose of the review was to identify long-term effects, if any, of the Full-Day Kindergarten Program in Anchorage.

The report concludes:

> Overall, the review presented in this report shows that Anchorage students had the opportunity for success regardless of the type of kindergarten program they attended, but that not all students were successful. Factors such as individual student initiative, home life, and educational opportunities after kindergarten are likely to influence students' later educational career and successes more than the type of kindergarten program attended. However, the Full-Day Kindergarten program has been successfully implemented in Anchorage, offers students an immediate pay-off in preparation for first grade, and relates to success in middle school as measured by Grade Point Average. Full-Day Kindergarten is popular, being both supported in the schools where it has been implemented and requested by other schools. In no instance has a local school community with Full-Day Kindergarten petitioned for a return to the Half-Day Kindergarten program.

PS 027272

The full report is offered for information and review.

BC/CC/FS

Attachment

Prepared by: Fred Stofflet, Executive Director, Curriculum & Evaluation

Approved by: Carol Comeau, Assistant Superintendent, Instruction

# Anchorage School District

# Full-Day Kindergarten Study

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Report Prepared by:

Frederick P. Stofflet, Ph.D.
Executive Director, Curriclum
& Evaluation

October 1998

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## Full-Day Kindergarten in Anchorage -- Brief History

In the 1988-89 school year, parents of some entering kindergarten students in Anchorage, Alaska were provided with a choice as to length of the school day for the first time. That year saw the initiation of Full-Day Kindergarten (FDK) Program in Anchorage at nine schools which served relative low income, high mobility, low achieving schools. All nine of the selected schools, detailed in Table 1, were served by the Title I/Chapter 1 Program in 1988-89 and continuously maintained that eligibility through the 1997-98 school year.

Table 1

Anchorage School District
Schools Which First Offered Full-Day Kindergarten in 1988-89

| | **Title I Eligible** | |
|---|---|---|
| **School** | **1988-89** | **1997-98** |
| Denali Elementary | Yes | Yes |
| Fairview Elementary | Yes | Yes |
| Government Hill Elementary | Yes | Yes |
| Mountain View Elementary | Yes | Yes |
| Muldoon Elementary | Yes | Yes |
| North Star Elementary | Yes | Yes |
| Ursa Major Elementary | Yes | Yes |
| Williwaw Elementary | Yes | Yes |
| Wonder Park Elementary | Yes | Yes |

In 1991-92, the FDK Program was expanded to include 10 additional schools, selected on a more random basis. Schools were considered for possible inclusion in this expansion based upon community interest and the availability of space within the building, at least at the time of original implementation. The specific schools included in the 1991-92 expansion are detailed in Table 2.

Three additional schools, detailed in Table 3, offered FDK with the initiation of the 1996-97 school year. These schools included William Tyson Elementary, a brand new school which opened with the program. The attendance area served by William Tyson Elementary School was totally contained in neighborhoods that had been served by schools offering the FDK Program since 1988-89. That is, the residents in the area served by Tyson had been attending schools with full-day kindergarten since 1988-89. The opening of a new school did not alter that situation.

Table 2

Anchorage School District
Schools Which First Offered Full-Day Kindergarten in 1991-92

| | Title I Eligible | |
|---|---|---|
| **School** | **1991-92** | **1997-98** |
| Abbott Loop Elementary | No | No |
| Airport Heights Elementary | No | No |
| Bayshore Elementary | No | No |
| Chugiak Elementary | No | No |
| College Gate Elementary | No | No |
| Klatt Elementary | No | No |
| Lake Otis Elementary | No | No |
| Nunaka Valley Elementary | No | No |
| Orion Elementary | No | No |
| Russian Jack Elementary | Yes | Yes |

Table 3

Anchorage School District
Schools Which First Offered Full-Day Kindergarten in 1996-97

| | Title I Eligible | |
|---|---|---|
| **School** | **1996-97** | **1997-98** |
| Kennedy Elementary School | Yes | Yes |
| Tyson Elementary School | Yes | Yes |
| Ursa Minor Elementary School | Yes | Yes |

The other two schools added in 1996-97 are both physically located on Fort Richardson Army Post and served students residing in the Post housing units. Both Kennedy Elementary and Ursa Minor Elementary initiated FDK in 1996-97. The third elementary school on the Post, Ursa Major Elementary School, was closed during 1996-97 for major repairs and refurbishment. Ursa Major had been offering FDK since 1988-89. In part, the expansion of the FDK Program to Kennedy and Ursa Minor was to accommodate the students whose normal assignment was Ursa Major Elementary School but who were assigned to Kennedy and Ursa Minor while Ursa Major was closed for major reconstruction.

Birchwood ABC Elementary School implemented FDK in 1997-98, based on a petition from the community of the school and School Board action. Two charter schools, Aquarian Charter School and Family Partnership Charter School, began operations in 1997-98 with full-day kindergarten as part of their operational programs. Chinook Elementary School implemented the FDK Program in 1998-99. None of the 1997-98 or 1998-99 implementing schools were or are eligible for Title I services.

As a final note on the history of FDK in Anchorage, there has not been a single instance of a school, once instituting the Full-Day Kindergarten Program, returning to the Half-Day Kindergarten (HDK) Program.

## Purpose and Design of This Study

In addition to the specific program implementations referenced above, there have been additional petitions from communities whose schools offer HDK to be allowed to offer FDK, there have been questions raised at schools with FDK which have become crowded regarding the advisability of returning to HDK to save space, and there has been at least one instance of a community going on record as desiring to maintain its half-day program (Northern Lights ABC).

The issue of expansion, maintenance, or contraction of the FDK Program within the Anchorage School District has been one of continuing discussion at the School Board level for the past several years. The discussions at the policy level frequently reach disagreement as to the added costs associated with the Full-Day Kindergarten Program, the additional revenue generated by the existence of the Full-Day Kindergarten Program, and the long term effects of the Full-Day Kindergarten Program.

National literature addressing the topic of long term effects has been gathered, reviewed, and previously provided to the Administration and School Board (See Appendix G). The review identified positive long-term effects in some studies. During the discussions at the Board level, there has been interest expressed in trying to establish the long term effects of the local FDK Program. **This report attempts to provide some insight into the issue of long term effects of the local Full-Day Kindergarten Program.** It makes no pretense to and does not address the continuing discussion on additional cost of the FDK Program versus additional revenue generated by the Program.

Since the first FDKs were initiated in Anchorage in 1988-89, the main cohort of students from that original class, based upon a normal matriculation pattern through school, is entering grade ten in 1998-99. Therefore, it is not yet possible to look at high school success, graduation rates, college attendance, or other post high school activity in trying to examine the effects of the Anchorage FDK Program.

Data which are available and which were examined as part of this study include:

a) Matriculation Patterns including movement within and out of the district, grade level progress, and "drop-out" patterns.

b) Special Education placements after the kindergarten year.

c) Junior High School/Middle Level grades and some high school grades.

d) Norm Referenced Test performance.

The schools that were chosen to house the first FDK Programs in Anchorage were chosen, in part, due to their students' need based on prior test performance, economic level of the neighborhoods served, and the relatively high mobility patterns of the students. The schools were, and are, what is commonly referred to as the "Title I" schools. This selection process makes it extremely difficult, if not impossible, to identify a corresponding set of "comparison" schools which did not house the FDK Program but which served a similar group of students. Because of this difficulty, the decision reached in the study design was that the best comparison group for the students in FDK in 1988-89 was the group of students who attended HDK in the same schools in 1987-88, the prior year.

It was also decided to include the 1989-90 kindergarten students in the study to reflect the second year of implementation of the FDK Program, in case there were implementation problems the first year which had been solved by the second year but which had long-term effects. It was also decided to examine the information for students from the HDK Program schools in the district from the same years to see if the overall patterns identified in the full-day and half-populations were similar or different.

All students who enrolled in kindergarten for the first time in the Anchorage School District in 1987-88, 1988-89, or 1989-90 were the subjects of the study. Students were individually classified into one of nine groups identified in Table 4. Student classification depended upon the year the student first entered kindergarten in Anchorage and the type of 1988-89 kindergarten program offered in the school or schools the student attended during the student's first kindergarten year.

If a student's entire kindergarten year was spent in a school or set of schools which offered the FDK Program in 1988-89, the student was in the "FDK

## Table 4

### Anchorage School District
### Number of Students in the "Full-Day Kindergarten" Study by Year of First Kindergarten Enrollment and Type of Program Attended

| | Attended One or More Schools Which Offered FDK in 1988-89 **(FDK Group)** | Attended One or More Schools Which Offered HDK in 1988-89 **(HDK Group)** | Moved Between Schools Which Offered FDK and Schools Which Offered HDK in 1988-89 **(Both Programs Group)** | Total Annual Entrees |
|---|---|---|---|---|
| First "K" Entry in 1987-88 | 521 | 3,219 | 141 | 3,881 |
| First "K" Entry in 1988-89 | 519 | 2,700 | 148 | 3,367 |
| First "K" Entry in 1989-90 | 592 | 3,032 | 126 | 3,750 |
| Total "K" Entrees 1987-90 | 1,632 | 8,951 | 415 | 10,998 |

Group." If the student spent the kindergarten year in a school or set of schools which offered the HDK Program in 1988-89, the student was in the "HDK Group." If a student moved between schools which offered different type of programs in 1988-89, the student was in the "Both Programs Group."

Individual student data related to matriculation patterns, special education placements, middle level credits and grades, and norm referenced tests were aggregated within the groups identified in Table 4. A review of that aggregated data follows in the next several sections of the report. Further, more detailed presentations of the aggregated data are to be found in the Appendices A to F of the report.

## Matriculation Patterns

Detailed information related to matriculation patterns is presented in Appendices A, B and C. Appendix A presents, by year of first enrollment and type of school attended, the number and portion of students who left the district and the portion who continued in district schools. These data are summarized in Table 5.

Table 5 indicates that about seven in eight of the students who enrolled in kindergarten in the Anchorage School District (ASD) in the late 1980s continued on with the district after their first year. By the time a given kindergarten group had moved through the primary grades, the continuing ASD cohort was reduced to about two students out of every three from the original group. At the point when most of the students completed elementary school and moved into junior high/middle school, slightly under six in ten of the original group still remained with the district. As the main part of the group moved into high school, only about half of the original group was still enrolled in the ASD. This pattern seems to be consistent over the three years of entry into kindergarten, regardless of the type of kindergarten program offered in the schools in which the students enrolled.

It is also noted that the pattern of movement described in Table 5 reflects enrollment in the district as a whole. It does not look at movement among schools within the district. Such an examination would further accentuate the transient nature of the overall population served by the ASD and described to some extent in Table 5.

Many of the students from the original groups who left the district during their elementary or middle school years transferred to schools in other districts during the school year, and their parents completed the necessary paperwork and notification to have the students designated as transfer students. Other students' families moved during the summer, with the students completing one year on roll but not appearing for school in ASD the following year. A few students left the district during a school year without going through normal transfer processes and became designated as "drop-outs." Given the age and grade levels of these individuals, it is highly unlikely that they actually dropped out of school entirely. It is more likely that they transferred to other schools or moved to home schooling without a formal transfer process.

An examination of the data in Appendix A shows that from one to four percent of each "year of entry - school type" cohort falls into this "drop-out"

Table 5

Anchorage School District
Percent of Kindergarten Enrollees Still in Anchorage School District Schools
at Various Points Following Kindergarten

| Year<br>Type of School Attended | Percent of Original Group Continuing After* | | | |
|---|---|---|---|---|
| | 1 year | 4 years | 7 years | 9 years |
| **1987-88 Cohort** | | | | |
| Attended Full-Day Schools | 86% | 66% | 57% | 49% |
| Attended Half-Day Schools | 87% | 68% | 57% | 52% |
| Attended Both Types | 89% | 67% | 62% | 52% |
| All in Annual Cohort | 87% | 67% | 57% | 51% |
| **1988-89 Cohort** | | | | |
| Attended Full-Day Schools | 86% | 69% | 60% | 53% |
| Attended Half-Day Schools | 88% | 69% | 59% | 53% |
| Attended Both Types | 88% | 65% | 55% | 41% |
| All in Annual Cohort | 88% | 69% | 59% | 52% |
| **1989-90 Cohort** | | | | |
| Attended Full-Day Schools | 87% | 67% | 57% | 47% |
| Attended Half-Day Schools | 89% | 69% | 58% | 52% |
| Attended Both Types | 90% | 72% | 63% | 54% |
| All in Annual Cohort | 89% | 69% | 58% | 52% |

* Year 1 is kindergarten -- For students progressing at one grade level per year of attendance (normal matriculation), the first column represents after Kindergarten, the second column represents after grade three, the third column represents after grade six, and the fourth column represents after grade eight.

category by the end of the normal grade eight year. Appendix B details the reasons recorded for leaving for the students who were classified as drop-outs. The primary reasons identified were "non-attendance" or "parental influence." This probably reflects actual transfers or movement to home schooling situations. Again, as with the movement out of the district discussed above, the issue seems to be independent of the half-day versus full-day kindergarten issue.

Table 6 summarizes the information provided in Appendix C. It examines the percent of students from each cohort who were retained in grade over the years, specifically identifying the grade levels of the students' first retentions. This is an area where a "kindergarten program" effect is noted. Specifically, the introduction of the FDK Program seems to have reduced the likelihood of referral to Modified Primary or retention in first grade.

Table 6

Anchorage School District
Percent of Original Kindergarten Enrollees Retained in Grade
One or More Years During Their Public School Careers

| Year<br>Type of School | Repeated K | Repeated 1 or in MP | Repeated 2 - 6 | Repeated 7 - 12 | Total Repeaters |
|---|---|---|---|---|---|
| **1987-88 Cohort** | | | | | |
| Full-Day Schools | 2% | 17% | 3% | 3% | 26% |
| Half-Day Schools | 2% | 11% | 2% | 1% | 16% |
| Both Types | 4% | 18% | 5% | 5% | 33% |
| Annual Cohort | 2% | 12% | 2% | 2% | 18% |
| **1988-89 Cohort** | | | | | |
| Full-Day Schools | 1% | 13% | 3% | 3% | 21% |
| Half-Day Schools | 1% | 11% | 1% | 2% | 15% |
| Both Types | 0% | 22% | 2% | 3% | 27% |
| Annual Cohort | 1% | 12% | 2% | 2% | 16% |
| **1989-90 Cohort** | | | | | |
| Full-Day Schools | 2% | 11% | 2% | 5% | 20% |
| Half-Day Schools | 1% | 11% | 2% | 5% | 15% |
| Both Types | 1% | 15% | 0% | 2% | 21% |
| Annual Cohort | 1% | 11% | 1% | 5% | 16% |

The cohorts of students who attended schools with only HDK had 16 percent of the 1987-88 group, 15 percent of the 1988-89 group, and 15 percent of the 1989-90 group retained sometime during their school careers, through 1997-98. This is quite a stable figure over the three year period of enrollments.

Cohorts from the FDK program schools had 26 percent of the students from the 1987-88 group, the year prior to the program, retained sometime during their school careers through 1997-98, while the cohorts from 1988-89 and 1989-90, the first two years of FDK, had only 21 percent and 20 percent, respectively, retained sometime prior to or including the 1997-98 school year. Looking at the grade level of first retention, the difference is at the "Repeated 1 or in MP" category.

The students from the FDK schools who started kindergarten in 1987-88 fell into this category at an overall rate of 17 percent. This was reduced to 13 percent for the 1988-89 cohort and 11 percent for the 1989-90 cohort. The "Repeat 1 or in MP" rate for the HDK schools was a consistent 11 percent over the three year period under examination. Thus, it seems that FDK did more appropriately prepare students for their first year or two beyond kindergarten than did the HDK program, based upon retention rates in grade one or referral to Modified Primary.

In summary, an examination of the matriculation information available on the three classes in question shows that:

1. Transferring from or remaining in the district through grade eight seemed to be independent of the type of kindergarten program in which a student was enrolled. Of those who start kindergarten in ASD, about two-thirds continue on with the district beyond third grade, about six in ten move into middle school beyond grade six, and about one in two move into the local high school program.

2. The Full-Day Kindergarten Program seems to have better prepared students for their next few years in elementary school than did the Half-Day Kindergarten Program, based on fewer retentions in grade one or referrals to Modified Primary from the FDK than from the HDK in the same schools.

**Special Education Placements**

Appendix D provides a detailed review of Special Education placements for students in the three kindergarten groups. A brief summary of this information is provided in Table 7. This table indicates the percent of the surviving cohort groups that were not identified as in need of special education services, excluding gifted education. That is, the figures shown in Table 7 indicate the percent of the ASD enrolled students from the groups that were in regular or gifted education, up to eight years after kindergarten.

The data in Table 7 show that the students who attended FDK in 1988-89 were more likely to be referred for special education services than were their

Table 7

Anchorage School District
Percent of Original Kindergarten Enrollees Not Identified for Special Education at Various Points Following Kindergarten

| Year<br>Type of School | Number of Years After Kindergarten . . . | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **1987-88 Cohort** | | | | | | | | |
| Full-Day Schools | 82% | 79% | 81% | 80% | 80% | 81% | 82% | 82% |
| Half-Day Schools | 89% | 85% | 86% | 83% | 84% | 85% | 87% | 87% |
| Both Types | 81% | 77% | 75% | 69% | 73% | 79% | 79% | 79% |
| Annual Cohort | 87% | 84% | 85% | 82% | 83% | 85% | 86% | 86% |
| **1988-89 Cohort** | | | | | | | | |
| Full-Day Schools | 80% | 78% | 75% | 75% | 77% | 77% | 77% | 76% |
| Half-Day Schools | 88% | 85% | 82% | 83% | 84% | 85% | 86% | 87% |
| Both Types | 83% | 79% | 73% | 65% | 70% | 71% | 73% | 74% |
| Annual Cohort | 87% | 84% | 80% | 81% | 82% | 83% | 85% | 85% |
| **1989-90 Cohort** | | | | | | | | |
| Full-Day Schools | 84% | 82% | 77% | 78% | 80% | 82% | 83% | 83% |
| Half-Day Schools | 87% | 82% | 81% | 81% | 83% | 85% | 86% | 87% |
| Both Types | 83% | 77% | 73% | 71% | 66% | 65% | 65% | 70% |
| Annual Cohort | 86% | 82% | 80% | 80% | 82% | 84% | 85% | 86% |

counterparts from the same schools in 1987-88. This might indicate that the FDK program resulted in more special education referrals. However, the pattern for the FDK students in 1989-90 was more similar to that for the 1987-88 group than for 1988-89 group. That is, the first group of FDK students seemed more likely to need special education services than did the HDK program students from the same schools the prior year. That pattern reversed itself in 1989-90 indicating that the special education pattern was more likely a group specific situation rather than a programmatic issue. The pattern of special education need did not vary greatly from year to year for the students who attended schools with the HDK Program over the three year period.

Table 7 examines all "non-gifted" special education placements. Tables 8 specifically focuses on students identified as "learning disabled" in the years after kindergarten. This category of exceptionality was examined because it may be more subject to change based upon educational preparation and

Table 8

## Anchorage School District
## Percent of Kindergarten Class Cohorts Identified as "Learning Disabled" in the Years Following Kindergarten

| **Kindergarten Class** Year | FDK Schools | HDK Schools | Both Types | All |
|---|---|---|---|---|
| **Started "K" in 1987-88** | | | | |
| 1988-89 | 7% | 5% | 8% | 5% |
| 1989-90 | 11% | 9% | 14% | 9% |
| 1990-91 | 12% | 10% | 17% | 11% |
| 1991-92 | 13% | 12% | 19% | 13% |
| 1992-93 | 11% | 12% | 18% | 12% |
| 1993-94 | 10% | 12% | 13% | 12% |
| 1994-95 | 11% | 11% | 13% | 11% |
| 1995-96 | 11% | 10% | 12% | 11% |
| 1996-97 | 10% | 10% | 10% | 10% |
| 1997-98 | 10% | 10% | 13% | 10% |
| **Started "K" in 1988-89** | | | | |
| 1989-90 | 10% | 6% | 13% | 7% |
| 1990-91 | 13% | 9% | 17% | 10% |
| 1991-92 | 15% | 11% | 20% | 12% |
| 1992-93 | 16% | 12% | 26% | 13% |
| 1993-94 | 15% | 12% | 22% | 13% |
| 1994-95 | 18% | 11% | 22% | 13% |
| 1995-96 | 18% | 11% | 20% | 12% |
| 1996-97 | 18% | 11% | 19% | 12% |
| 1997-98 | 18% | 10% | 16% | 12% |
| **Started "K" in 1989-90** | | | | |
| 1990-91 | 6% | 6% | 9% | 6% |
| 1991-92 | 9% | 9% | 14% | 9% |
| 1992-93 | 14% | 11% | 13% | 11% |
| 1993-94 | 15% | 12% | 15% | 13% |
| 1994-95 | 14% | 13% | 20% | 13% |
| 1995-96 | 13% | 12% | 23% | 13% |
| 1996-97 | 13% | 12% | 24% | 12% |
| 1997-98 | 14% | 11% | 19% | 12% |

experience than some of the other special categories and specifically more susceptible to change based upon different kindergarten programs. The data for Learning Disabled children is similar to that for the overall identification of special education needs.

The information in Table 8 shows that there was an increase in the percent of students from the 1988-89 Full-Day Kindergarten group identified as "Learning Disabled" as compared to the Half-Day students from the same schools in 1987-88. The percentages from the FDK schools in 1989-90 dropped back down toward the level shown in 1987-88, but not totally to that level. At the same time, the percentages of students identified as Learning Disabled from the HDK schools remained relatively stable for the students from the three kindergarten classes. Also, for all three groups, the students who moved between program types at kindergarten seemed more likely to be identified as Learning Disabled later in their educational careers than were students who spent their entire kindergarten year in one or the other of the program types. This may be an artifact of the transience within the population that moved from school type to school type.

Essentially, the data in Table 8 suggest that there may have been a propensity for students from FDK to be identified as "Learning Disabled" at a higher rate than students from the same schools when the HDK program was in effect. Coupled with the observed decrease in referral to Modified Primary for these students, it might be suggested that the reduced MP referral rate resulted in more students moving on directly to first grade not totally prepared socially, academically, or emotionally and that this resulted in greater identification of students with learning disabilities later on in their school careers.

Table 9 reviews the participation rates of students from the three kindergarten classes in "gifted" education over the eight to ten year period following the students' first enrollment in kindergarten. Students from the 1987-88 class and students from the 1988-89 class would have been in grades ten and nine, respectively, in 1997-98 if they moved one grade level per year of educational experience. An examination of the patterns of identified "giftedness" for these students shows a gradual build up of students from grade one to grade eight, and then a tremendous decline in identified students at the high school level. This pattern most likely reflects the program and options available in Anchorage, but it might also suggest an over-identification of students as "gifted," particularly in the middle grades where some eight to eleven percent of the population have been identified. This observation is independent of type of kindergarten program attended by the students.

Looking across the yearly groups from the FDK schools, it appears that slightly more of the students in the upper elementary grades may have been identified as gifted from the 1988-89 and 1989-90 groups (actual FDK) than

Table 9

## Anchorage School District
## Percent of Kindergarten Class Cohorts Identified for Gifted Education at in the Years Following Kindergarten

| **Kindergarten Class** Year | FDK Schools | HDK Schools | Both Types | All |
|---|---|---|---|---|
| **Started "K" in 1987-88** | | | | |
| 1988-89 | 0% | <1% | 0% | <1% |
| 1989-90 | 1% | 2% | 0% | 2% |
| 1990-91 | 2% | 4% | 1% | 4% |
| 1991-92 | 5% | 6% | 1% | 6% |
| 1992-93 | 5% | 7% | 2% | 7% |
| 1993-94 | 5% | 9% | 3% | 8% |
| 1994-95 | 6% | 9% | 2% | 8% |
| 1995-96 | 7% | 9% | 1% | 9% |
| 1996-97 | 0% | <1% | 0% | <1% |
| 1997-98 | 0% | <1% | 0% | <1% |
| **Started "K" in 1988-89** | | | | |
| 1989-90 | 1% | 1% | 0% | 1% |
| 1990-91 | 2% | 2% | 0% | 2% |
| 1991-92 | 5% | 6% | 1% | 5% |
| 1992-93 | 6% | 7% | 1% | 7% |
| 1993-94 | 9% | 9% | 2% | 9% |
| 1994-95 | 8% | 10% | 2% | 9% |
| 1995-96 | 6% | 11% | 2% | 10% |
| 1996-97 | 5% | 11% | 3% | 10% |
| 1997-98 | <1% | <1% | 0% | <1% |
| **Started "K" in 1989-90** | | | | |
| 1990-91 | 0% | 1% | 0% | 1% |
| 1991-92 | 2% | 2% | 0% | 2% |
| 1992-93 | 2% | 4% | 1% | 4% |
| 1993-94 | 6% | 9% | 3% | 8% |
| 1994-95 | 7% | 10% | 4% | 10% |
| 1995-96 | 8% | 11% | 4% | 10% |
| 1996-97 | 7% | 12% | 5% | 11% |
| 1997-98 | 6% | 12% | 1% | 11% |

from the 1987-88 group (actual HDK from the same schools). This might argue that FDK increased the likelihood of giftedness. However, the data for the HDK schools indicates that 1988-89 and 1989-90 enrollees were more likely to be identified as gifted in the upper elementary and middle years than were their 1987-88 counterparts. That is, the identifications seem more related to year of entry and perhaps shifting criteria over time than to the type of kindergarten program students attended.

In summary, relative to special education placements after the kindergarten year:

1. the information indicates there may be a weak link between FDK and identification as "Learning Disabled." This might reflect the reduced referral of FDK students to Modified Primary and a resultant later identification of some students as having learning disabilities, when such disabilities had been corrected through the maturation process in Modified Primary in former years.

2. There was not an apparent relationship between FDK and later identification as gifted.

3. For all of the groups, there seemed to be a gradual increase in the identification of students as gifted through grades six to eight followed by a tremendous decrease in the portion of students identified as gifted as the groups moved into high school.

## Grades and Credits

The majority of students from the 1987-88 kindergarten class had completed tenth grade in 1997-98. The majority of students from the 1988-89 class had completed grade nine and the majority of students from the 1989-90 kindergarten class had completed grade eight in 1997-98. This means it is possible to examine middle school performances for all three year groups and grade nine performances for the first two groups under review. As mentioned earlier, graduation rates and high school performances can not be examined in detail at this time.

Appendix E presents grade-by-grade information regarding credits attempted, credits earned, grade point averages, and absences per credit attempted for the ASD continuing students from the three kindergarten years broken down by type of program in the schools the students attended in kindergarten. Table 10 presents a summary of "credits attempted" and "credits earned" in grades seven and eight for continuing students from all three of the kindergarten years under review. Table 11 presents the same information for grade nine for students from the 1987-88 kindergarten class and the 1988-89 kindergarten

Table 10

Anchorage School District
Middle School Credits and Grade Point Averages for
Continuing Students from the 1987-88, 1988-89, and 1989-90
Kindergarten Classes by Type of Kindergarten Program

| Program Type | During Grade Seven | | | During Grade Eight | | |
|---|---|---|---|---|---|---|
| Year | Credits Attempted | Credits Earned | GPA | Credits Attempted | Credits Earned | GPA |
| Full-Day Schools | | | | | | |
| 1987-88 "K" | 6.03 | 5.06 | 2.33 | 6.08 | 5.30 | 2.36 |
| 1988-89 "K" | 6.25 | 5.30 | 2.49 | 6.47 | 5.76 | 2.58 |
| 1989-90 "K" | 6.68 | 5.72 | 2.45 | 6.71 | 6.06 | 2.65 |
| Half-Day Schools | | | | | | |
| 1987-88 "K" | 6.13 | 5.62 | 2.74 | 6.30 | 5.76 | 2.70 |
| 1988-89 "K" | 6.36 | 5.88 | 2.80 | 6.67 | 6.13 | 2.78 |
| 1989-90 "K" | 6.72 | 6.14 | 2.76 | 6.75 | 6.32 | 2.86 |
| Both Types of School | | | | | | |
| 1987-88 "K" | 5.77 | 4.67 | 2.13 | 6.15 | 5.13 | 2.06 |
| 1988-89 "K" | 6.20 | 5.37 | 2.27 | 6.52 | 5.31 | 2.16 |
| 1989-90 "K" | 6.60 | 5.60 | 2.40 | 6.63 | 5.83 | 2.44 |
| All Students | | | | | | |
| 1987-88 "K" | 6.10 | 5.51 | 2.67 | 6.27 | 5.68 | 2.64 |
| 1988-89 "K" | 6.34 | 5.77 | 2.74 | 6.63 | 6.05 | 2.73 |
| 1989-90 "K" | 6.71 | 6.06 | 2.70 | 6.74 | 6.27 | 2.82 |

class. Students from the 1989-90 class who followed normal movement patterns through the grades had not yet completed grade nine and are therefore not included in Table 11.

Students did not actually earn credits in middle school, but for the purposes of this report, a junior high or middle schools student was counted as attempting a half-credit for each semester course taken, assuming the course met for one period per day. If the students earned a grade of "A", "B", "C", or "D" in a course, the student was said to have earned the half-credit for the specific course. The Grade Point Average is on a four point scale with an "A"

Table 11

### Anchorage School District
### Grade 9 Credits and Grade Point Averages for Continuing Students from the 1987-88 and 1988-89 Kindergarten Classes by Type of Kindergarten Program

| Program Type<br>Year | Credits Attempted | Credits Earned | GPA |
|---|---|---|---|
| Full-Day Schools | | | |
| 1987-88 "K" | 5.36 | 4.69 | 2.20 |
| 1988-89 "K" | 5.49 | 4.89 | 2.37 |
| Half-Day Schools | | | |
| 1987-88 "K" | 5.61 | 5.19 | 2.62 |
| 1988-89 "K" | 5.72 | 5.38 | 2.75 |
| Both Types of School | | | |
| 1987-88 "K" | 5.02 | 4.27 | 2.04 |
| 1988-89 "K" | 5.14 | 4.04 | 1.80 |
| All Students | | | |
| 1987-88 "K" | 5.57 | 5.10 | 2,55 |
| 1988-89 "K" | 5.67 | 5.28 | 2.68 |

being worth 4 points, a "B" worth 3 points, a "C" worth 2 points, a "D" worth 1 point, and an "F" worth 0 points. There was no adjustment made in the grade point averages which are displayed that reflect the level of difficulty of the courses taken.

The Credits Attempted and Credits Earned displayed in Table 10 indicate an increase over the years as the three kindergarten classes moved through grades seven and eight. This was true regardless of the type of kindergarten program the students attended and probably reflects the transition from the junior high model to the middle school model as these students moved through grades seven and eight. As more schools moved to the middle school model, more schools moved to a "seven-period" day as opposed to a "six-period" day with a corresponding increase in credit opportunity for students.

The Credits Attempted and Credits Earned in grade nine also increased for the 1988-89 kindergarten class over those displayed for the 1987-88 kindergarten class. However, this pattern seemed to be consistent across program types. That is, the credit increase at grade nine seemed to be independent of type of kindergarten program in which the students had enrolled. These are the first two groups to whom the increased local graduation requirements applied, and perhaps the increase reflects knowledge of those requirements or reflects increased opportunities for students through summer school, graduation support services, or other opportunities for credit attainment.

The Grade Point Average (GPA) at middle school does seem to be related to the type of kindergarten program the students attended earlier in their school careers. For students who attended the schools that became FDK schools in 1988-89, the performance levels moved from a seventh grade GPA of 2.33 for the 1987-88 group to a seventh grade GPA of 2.49 and 2.45 for the 1988-89 and 1989-90 groups, respectively. Similarly, the eighth grade GPA's for these three groups were 2.36, 2.58, and 2.65 for the continuing 1987-88, 1988-89, and 1989-90 "K" students, respectively. These data suggest that students from the first two years of FDK performed at a higher level in middle school than did their counterparts from the same schools who attended HDK in 1987-88.

The data for students who attended "K" in schools which continued with the HDK Program in 1988-89 presents a different pattern. The seventh grade GPA's were 2.74, 2.80, and 2.76 for the 1987-88, 1988-89, and 1989-90 kindergarten groups, respectively. That is, as the HDK groups moved through seventh grade, there was an increase in GPA on the order of 0.02 to 0.06 points, as compared to the 0.12 to 0.16 point increase seen with the FDK groups.

At grade eight, the HDK groups demonstrated a pattern of substantially increasing GPA's as the students from the three years moved through, with a GPA of 2.70 for the 1987-88 group, 2.78 for the 1988-89 group, and 2.86 for the 1989-90 group. This 0.08 to 0.16 point increase in GPA's for the HDK students, while substantial, is less than the 0.22 to 0.29 GPA increase observed within the FDK groups.

The ninth grade information has been presented only for the 1987-88 and 1988-89 "K" groups. The 1989-90 group had not yet completed ninth grade in 1997-98.

The GPA information for the two ninth grade classes demonstrates increased performances for the students from the 1988-89 "K" class as compared to the 1987-88 "K" class. For students from the FDK schools, the GPA for the 1987-88 group was 2.20. For the 1988-89 group, the GPA was 2.37. This 0.17 GPA gain is slightly larger than, but on the same general order as, the 0.13 movement seen within the HDK schools' groups as the 1987-88 class presented a ninth grade GPA of 2.62 compared to a ninth grade of 2.75 for the 1988-89 "K" class.

Overall, the credit and grade point information indicate that:

1. Students from the neighborhoods served by the 1988-89 FDK schools did not perform as well in school in terms of middle school and ninth grade credits earned and grade point averages as did students who spent their kindergarten year in schools from other parts of the community. Students who were transient and moved between school types during kindergarten performed even less well in middle and high school than did their less transient counterparts.

2. Credits attempted and earned seemed to increase as each succeeding class under examination moved through middle school and into high school. However, that increase in credits seems more likely to be related to changes in the programs offered at the middle school level and in graduation requirements and opportunities at the high school level than to the type of kindergarten program the students attended.

3. Grade point averages also tended to increase as students from the three years under study moved through the seventh, eighth, and ninth grade years. Part of the observed increase in GPA might be explained by more able students, by more elective opportunities for students and a tendency for students to perform better in classes of their choice than in required areas, or even by a general "grade inflation" over the three years. However, since the increase in GPA, particularly in the middle grades, was more pronounced for students from the FDK schools than from the HDK schools, there appears to be a relationship between type of kindergarten program and performance in the seventh, eighth, and ninth grades when performance is measured by grades earned in school.

**Norm Referenced Test Results**

The Anchorage School District traditionally has asked students in grades 3 through 11 to take norm referenced tests once each year. However, over the past decade, there have been variations in the specific tests administered to and subtests taken by students at specific grade levels in Anchorage. Additionally, the testing period has shifted from spring to fall to spring again.

The norm referenced tests used in Anchorage over the years tested at least the areas of Reading, Language Arts, and Mathematics. Appendix F presents norm referenced test results on a grade level by grade level basis, for grades 3 through 11, for students tested in 1990-91 through 1997-98. Students whose scores are aggregated in the information in Appendix F were continuing

## Table 12

## Anchorage School District
## Norm Referenced Test Results (Percentile Rank Scores) by Type of Kindergarten Program
## Students Who Started Kindergarten in Anchorage in 1987-88, 1988-89, and 1989-90 and Moved One Grade Level per Year of Enrollment

### Grade 4 Results

| Program Type | Reading | | Lang. Arts | | Mathematics | | Name |
|---|---|---|---|---|---|---|---|
| Year of Entry | PR | NT | PR | NT | PR | NT * | of Test |
| Full-Day Schools | | | | | | | |
| 1987-88 | 47 | 198 | 42 | 191 | 53 | 200 | ITBS |
| 1988-89 | 48 | 241 | 45 | 240 | 54 | 244 | ITBS |
| 1989-90 | 41 | 273 | 40 | 267 | 48 | 266 | ITBS |
| Half-Day Schools | | | | | | | |
| 1987-88 | 58 | 1,521 | 54 | 1,455 | 64 | 1,507 | ITBS |
| 1988-89 | 60 | 1,422 | 59 | 1,417 | 67 | 1,411 | ITBS |
| 1989-90 | 61 | 1,581 | 60 | 1,546 | 67 | 1,580 | ITBS |
| Attended Both | | | | | | | |
| 1987-88 | 38 | 56 | 30 | 52 | 39 | 55 | ITBS |
| 1988-89 | 36 | 51 | 35 | 49 | 41 | 50 | ITBS |
| 1989-90 | 37 | 58 | 39 | 54 | 40 | 57 | ITBS |
| All "K" Enrollees | | | | | | | |
| 1987-88 | 56 | 1,775 | 52 | 1,698 | 62 | 1,762 | ITBS |
| 1988-89 | 58 | 1,714 | 56 | 1,706 | 64 | 1,705 | ITBS |
| 1989-90 | 57 | 1,912 | 57 | 1,867 | 63 | 1,903 | ITBS |

* PR Percentile Rank corresponding to average Normal Curve Equivalent score for the group.
NT Number of students from the original kindergarten group tested in the grade level.

students in ASD who first enrolled in kindergarten in 1987-88, 1988-89, or 1989-90.

The test used in Anchorage prior to the 1995-96 school year was the Iowa Tests of Basic Skills (ITBS). Since 1995-96, the district has been using the California

Table 13

Anchorage School District
Norm Referenced Test Results (Percentile Rank Scores) by
Type of Kindergarten Program
Students Who Started Kindergarten in Anchorage in
1987-88, 1988-89, and 1989-90 and Moved One Grade Level
per Year of Enrollment

Grade 6 Results

| Program Type | Reading | | Lang. Arts | | Mathematics | | Name |
|---|---|---|---|---|---|---|---|
| Year of Entry | PR | NT | PR | NT | PR | NT * | of Test |
| Full-Day Schools | | | | | | | |
| 1987-88 | 50 | 179 | 51 | 176 | 59 | 175 | ITBS |
| 1988-89 | 54 | 203 | 56 | 196 | 59 | 203 | ITBS |
| 1989-90 | 50 | 247 | 51 | 245 | 62 | 248 | CAT |
| Half-Day Schools | | | | | | | |
| 1987-88 | 66 | 1,368 | 63 | 1,368 | 69 | 1,372 | ITBS |
| 1988-89 | 65 | 1,293 | 65 | 1,273 | 71 | 1,296 | ITBS |
| 1989-90 | 69 | 1,410 | 72 | 1,408 | 75 | 1,405 | CAT |
| Attended Both | | | | | | | |
| 1987-88 | 43 | 48 | 45 | 48 | 45 | 49 | ITBS |
| 1988-89 | 44 | 45 | 47 | 43 | 47 | 45 | ITBS |
| 1989-90 | 43 | 45 | 47 | 45 | 48 | 45 | CAT |
| All "K" Enrollees | | | | | | | |
| 1987-88 | 63 | 1,595 | 61 | 1,592 | 67 | 1,596 | ITBS |
| 1988-89 | 63 | 1,541 | 64 | 1,512 | 69 | 1,544 | ITBS |
| 1989-90 | 66 | 1,702 | 68 | 1,698 | 72 | 1,698 | CAT |

* PR Percentile Rank corresponding to average Normal Curve Equivalent score for the group.
NT Number of students from the original kindergarten group tested in the grade level.

Achievement Tests (CAT) as its norm referenced test. Given the variations in subtests administered to different grade levels at various times, there are only four grade levels at which all students were consistently tested from the 1990-91 through the 1997-98 school year; grades four, six, eight and eleven. Since none of the cohort groups had progressed to grade eleven through 1997-

## Table 14

### Anchorage School District
### Norm Referenced Test Results (Percentile Rank Scores) by Type of Kindergarten Program
### Students Who Started Kindergarten in Anchorage in 1987-88, 1988-89, and 1989-90 and Moved One Grade Level per Year of Enrollment

### Grade 8 Results

| Program Type | Reading | | Lang. Arts | | Mathematics | | Name of Test |
|---|---|---|---|---|---|---|---|
| Year of Entry | PR | NT | PR | NT | PR | NT * | |
| Full-Day Schools | | | | | | | |
| 1987-88 | 61 | 145 | 57 | 146 | 63 | 145 | CAT |
| 1988-89 | 62 | 162 | 56 | 162 | 61 | 158 | CAT |
| 1989-90 | 59 | 209 | 54 | 208 | 61 | 207 | CAT |
| Half-Day Schools | | | | | | | |
| 1987-88 | 71 | 1,189 | 63 | 1,184 | 70 | 1,182 | CAT |
| 1988-89 | 71 | 1,080 | 66 | 1,075 | 73 | 1,083 | CAT |
| 1989-90 | 74 | 1,264 | 68 | 1,262 | 73 | 1,266 | CAT |
| Attended Both | | | | | | | |
| 1987-88 | 48 | 36 | 38 | 37 | 47 | 37 | CAT |
| 1988-89 | 41 | 33 | 44 | 33 | 47 | 32 | CAT |
| 1989-90 | 50 | 41 | 50 | 40 | 47 | 41 | CAT |
| All "K" Enrollees | | | | | | | |
| 1987-88 | 69 | 1,370 | 61 | 1,367 | 68 | 1,364 | CAT |
| 1988-89 | 69 | 1,275 | 64 | 1,270 | 71 | 1,273 | CAT |
| 1989-90 | 71 | 1,514 | 66 | 1,510 | 71 | 1,514 | CAT |

* PR Percentile Rank corresponding to average Normal Curve Equivalent score for the group.
NT Number of students from the original kindergarten group tested in the grade level.

98, data is available only at grades four, six and eight for all, or nearly all, of the students from the original groups who were still with the ASD at the time the tests were administered. These data are summarized in Tables 12, 13 and 14.

Table 12 presents percentile rank scores corresponding to average normal curve equivalent scores for students from the three groups when they were tested in grade four. The table also indicates the number of students tested. Table 13 presents similar information for the students tested in grade six, and Table 14 presents grade eight information. Only the students who were matriculating at the pace of one grade per year of attendance are included in the analyses presented in Tables 12, 13 and 14.

The norm referenced test data presented in Tables 12, 13 and 14 do not demonstrate a strong relationship between the type of kindergarten program students attended and their subsequent performance on achievement tests. Within the FDK schools, it appears that the 1988-89 group performed slightly better than the 1987-88 group at the various "check-points" and that the 1989-90 group performed at a level slightly below the 1987-88 group at the same check-points. That is, as the FDK program was implemented, scores went up and then back down. The HDK schools had patterns of scores that indicated stability or improvement with each succeeding entry year. There was some variation across the grades, but the patterns do not demonstrate a consistent relationship between type of kindergarten program and norm referenced test performances.

As was seen with the credit and grade information, the students from the HDK schools performed at a higher level, as a group, than did students from the FDK schools. Students who were transient during their kindergarten years and attended both types of schools performed at a level well below either of the other two groups on the norm referenced tests. These patterns are not surprising given the known differences in demographics among the three groups and the known relationships of those demographics to test performance.

Overall, the norm referenced test data indicate that:

1. There is a strong relationship between test performance and school demographics.

2. There is not strong evidence of a relationship between test performance in grades four, six, and eight and the type of kindergarten program a students attended.

3. Students who stay with the Anchorage School District for their education from kindergarten through grade eight, as a group, score around the 70th percentile in Reading and Mathematics and around the 65th percentile in Language Arts at the end of eighth grade.

## Conclusion

This review was designed to examine the long-term effects of the full-day kindergarten program in Anchorage on students who attended that program as they made their way through the educational milieu in the years following kindergarten. It provided information related to three groups of kindergarten classes; the kindergarten students from 1987-88 -- the last year in which there was no full-day kindergarten in Anchorage, the kindergarten students from 1988-89 -- the first year in which nine elementary schools offered full-day kindergarten in Anchorage, and 1989-90 -- the second year of full-day kindergarten in Anchorage.

Areas which were examined in this study included:

a) Matriculation Patterns including movement within and out of the district, grade level progress, and "drop-out" patterns.

b) Special Education placements after the kindergarten year.

c) Junior High School/Middle Level grades and some high school grades.

d) Norm Referenced Test performance.

Findings related to full-day kindergarten versus half-day kindergarten indicate that:

1. There was no relationship between kindergarten program of attendance and the students' likelihood of staying with or leaving the Anchorage School District.

2. Students from the FDK program were less likely than were students from the same schools in the HDK program to be retained in first grade or referred to modified primary.

3. Students from the FDK program schools seemed to be slightly more likely than were students in the HDK program from the same schools to be identified as having specific learning disabilities later in their school careers.

4. There was no relationship between the type of kindergarten program attended and later identification as being gifted.

5. The type of kindergarten program attended was not related to the credits attempted and credits earned in seventh, eighth, and ninth grades.

6. FDK students had a tendency to have a higher grade point average in the middle grades than did students from the HDK program from the same schools.

7. Norm referenced tests results did not seem to be related to type of kindergarten program attended by the students.

On balance, this review reflects no major long-term effect from the type of kindergarten program students attend. It is likely that, over the years, family background, individual study habits, and other school programmatic factors outweigh the "kindergarten" factor. There seems to be a short term effect with FDK students, at least from the Title I type schools, better prepared for first grade than were their counterparts from HDK. Given that the implementation of FDK in Anchorage was confined to the "Title I" schools initially, the effect on other school populations has not really been examined in this review.

Other findings related to the district as a whole that are:

1. By the end of sixth grade, about 40 percent of the original kindergarten enrollees had left the district. At the end of grade eight, half of the original enrollees had left ASD.

2. The portion of students identified as gifted grew through the elementary and the middle grades and then plummeted as students move into high school.

3. Students who spent their school careers from kindergarten through grade eight in the ASD scored, as a group, at the 70th percentile on norm referenced tests in the areas of Reading and Mathematics and at the 65th percentile in Language Arts at the end of grade eight.

Overall, the review presented in this report shows that Anchorage students had the opportunity for success regardless of the type of kindergarten program they attended, but that not all students were successful. Factors such as individual student initiative, home life, and educational opportunities after kindergarten are likely to influence students' later educational career and successes more than the type of kindergarten program attended. However, the Full-Day Kindergarten program has been successfully implemented in Anchorage, offers students an immediate pay-off in preparation for first grade, and relates to success in middle school as measured by Grade Point Average. Full-Day Kindergarten is popular, being both supported in the schools where it has been implemented and requested by other schools. In no instance has a local school community with Full-Day Kindergarten petitioned for a return to the Half-Day Kindergarten program.

## Appendix A

## Annual Enrollment Status of 1987-88, 1988-89, and 1989-90 Kindergarten Cohorts in Years Following Kindergarten

## Table A-1

### Enrollment Patterns for 1987-88 Kindergarten Enrollees Attended "K" Only in Schools Which Became FDK in 1988-89

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1987-88 | 41 | 0 | 2 | 30 | 448 | 73 | 521 | 86% |
| 1988-89 | 34 | 0 | 0 | 15 | 399 | 122 | 521 | 77% |
| 1989-90 | 14 | 0 | 0 | 20 | 365 | 156 | 521 | 70% |
| 1990-91 | 8 | 0 | 0 | 15 | 342 | 179 | 521 | 66% |
| 1991-92 | 13 | 0 | 0 | 7 | 322 | 199 | 521 | 62% |
| 1992-93 | 5 | 0 | 1 | 5 | 311 | 210 | 521 | 60% |
| **1993-94** | **6** | **0** | **1** | **7** | **297** | **224** | **521** | **57%** |
| 1994-95 | 6 | 0 | 0 | 8 | 283 | 238 | 521 | 54% |
| **1995-96** | **7** | **0** | **4** | **18** | **254** | **267** | **521** | **49%** |
| 1996-97 | 6 | 0 | 6 | 7 | 235 | 286 | 521 | 45% |
| 1997-98 | 16 | 0 | 25 | NA | 194 | 327 | 521 | 37% |
| Total | 156 | 0 | 39 | 132 | 194 | 327 | 521 | 37% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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## Table A-2

### Enrollment Patterns for 1987-88 Kindergarten Enrollees Attended "K" Only in Schools Which Remained HDK in 1988-89

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1987-88 | 220 | 0 | 14 | 173 | 2,812 | 407 | 3,219 | 87% |
| 1988-89 | 153 | 0 | 5 | 130 | 2,524 | 695 | 3,219 | 78% |
| 1989-90 | 109 | 0 | 1 | 93 | 2,321 | 898 | 3,219 | 72% |
| 1990-91 | 63 | 0 | 1 | 79 | 2,178 | 1,041 | 3,219 | 68% |
| 1991-92 | 64 | 0 | 0 | 55 | 2,059 | 1,160 | 3,219 | 64% |
| 1992-93 | 48 | 0 | 0 | 69 | 1,942 | 1,277 | 3,219 | 60% |
| **1993-94** | **30** | **0** | **2** | **69** | **1,841** | **1,378** | **3,219** | **57%** |
| 1994-95 | 39 | 0 | 0 | 47 | 1,755 | 1,464 | 3,219 | 55% |
| **1995-96** | **37** | **0** | **4** | **53** | **1,661** | **1,558** | **3,219** | **52%** |
| 1996-97 | 24 | 1 | 21 | 61 | 1,554 | 1,665 | 3,219 | 48% |
| 1997-98 | 46 | 0 | 90 | NA | 1,418 | 1,801 | 3,219 | 44% |
| Total | 833 | 1 | 138 | 829 | 1,418 | 1,801 | 3,219 | 44% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

## Table A-3

### Enrollment Patterns for 1987-88 Kindergarten Enrollees
### Attended "K" in Both Types of Schools

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1987-88 | 7 | 0 | 1 | 8 | 125 | 16 | 141 | 89% |
| 1988-89 | 12 | 0 | 0 | 6 | 107 | 34 | 141 | 76% |
| 1989-90 | 3 | 0 | 0 | 3 | 101 | 40 | 141 | 72% |
| 1990-91 | 4 | 0 | 0 | 2 | 95 | 46 | 141 | 67% |
| 1991-92 | 1 | 0 | 0 | 3 | 91 | 50 | 141 | 65% |
| 1992-93 | 1 | 0 | 0 | 1 | 89 | 52 | 141 | 63% |
| 1993-94 | 1 | 0 | 0 | 1 | 87 | 54 | 141 | 62% |
| 1994-95 | 3 | 0 | 0 | 3 | 81 | 60 | 141 | 57% |
| 1995-96 | 3 | 0 | 2 | 3 | 73 | 68 | 141 | 52% |
| 1996-97 | 1 | 0 | 1 | 0 | 71 | 70 | 141 | 50% |
| 1997-98 | 4 | 0 | 13 | NA | 54 | 87 | 141 | 38% |
| Total | 40 | 0 | 17 | 30 | 54 | 87 | 141 | 38% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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## Table A-4

### Enrollment Patterns for 1987-88 Kindergarten Enrollees
### All Enrollees

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1987-88 | 268 | 0 | 17 | 211 | 3,385 | 496 | 3,881 | 87% |
| 1988-89 | 199 | 0 | 5 | 151 | 3,030 | 851 | 3,881 | 78% |
| 1989-90 | 126 | 0 | 1 | 116 | 2,787 | 1,094 | 3,881 | 72% |
| 1990-91 | 75 | 0 | 1 | 96 | 2,615 | 1,266 | 3,881 | 67% |
| 1991-92 | 78 | 0 | 0 | 65 | 2,472 | 1,409 | 3,881 | 64% |
| 1992-93 | 54 | 0 | 1 | 75 | 2,342 | 1,539 | 3,881 | 60% |
| 1993-94 | 37 | 0 | 3 | 77 | 2,225 | 1,656 | 3,881 | 57% |
| 1994-95 | 48 | 0 | 0 | 58 | 2,119 | 1,762 | 3,881 | 55% |
| 1995-96 | 47 | 0 | 10 | 74 | 1,988 | 1,893 | 3,881 | 51% |
| 1996-97 | 31 | 1 | 28 | 68 | 1,860 | 2,021 | 3,881 | 48% |
| 1997-98 | 66 | 0 | 128 | NA | 1,666 | 2,215 | 3,881 | 43% |
| Total | 1,029 | 1 | 194 | 991 | 1,666 | 2,215 | 3,881 | 43% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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## Table A-5

### Enrollment Patterns for 1988-89 Kindergarten Enrollees Attended "K" Only in Schools Which Had FDK

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1988-89 | 47 | 0 | 0 | 28 | 444 | 75 | 519 | 86% |
| 1989-90 | 21 | 0 | 0 | 18 | 405 | 114 | 519 | 78% |
| 1990-91 | 10 | 0 | 0 | 7 | 388 | 131 | 519 | 75% |
| 1991-92 | 18 | 0 | 0 | 11 | 359 | 160 | 519 | 69% |
| 1992-93 | 5 | 0 | 0 | 11 | 343 | 176 | 519 | 66% |
| 1993-94 | 9 | 1 | 0 | 9 | 324 | 195 | 519 | 62% |
| 1994-95 | 8 | 0 | 0 | 7 | 309 | 210 | 519 | 60% |
| 1995-96 | 6 | 0 | 1 | 10 | 292 | 227 | 519 | 56% |
| 1996-97 | 12 | 0 | 2 | 5 | 273 | 246 | 519 | 53% |
| 1997-98 | 14 | 0 | 22 | NA | 237 | 282 | 519 | 46% |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| Total | 150 | 1 | 25 | 106 | 237 | 282 | 519 | 46% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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## Table A-6

### Enrollment Patterns for 1988-89 Kindergarten Enrollees Attended "K" Only in Schools Which Had HDK

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1988-89 | 159 | 0 | 23 | 145 | 2,373 | 327 | 2,700 | 88% |
| 1989-90 | 103 | 0 | 0 | 107 | 2,163 | 537 | 2,700 | 80% |
| 1990-91 | 72 | 0 | 0 | 71 | 2,020 | 680 | 2,700 | 75% |
| 1991-92 | 69 | 1 | 0 | 77 | 1,873 | 827 | 2,700 | 69% |
| 1992-93 | 46 | 0 | 1 | 55 | 1,771 | 929 | 2,700 | 66% |
| 1993-94 | 31 | 0 | 1 | 41 | 1,698 | 1,002 | 2,700 | 63% |
| 1994-95 | 30 | 0 | 0 | 76 | 1,592 | 1,108 | 2,700 | 59% |
| 1995-96 | 22 | 0 | 2 | 48 | 1,520 | 1,180 | 2,700 | 56% |
| 1996-97 | 29 | 1 | 7 | 57 | 1,426 | 1,274 | 2,700 | 53% |
| 1997-98 | 37 | 0 | 47 | NA | 1,342 | 1,358 | 2,700 | 50% |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| Total | 598 | 2 | 81 | 677 | 1,342 | 1,358 | 2,700 | 50% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

Table A-7

Enrollment Patterns for 1988-89 Kindergarten Enrollees
Attended "K" in Both Types of Schools

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1988-89 | 8 | 0 | 3 | 7 | 130 | 18 | 148 | 88% |
| 1989-90 | 9 | 0 | 1 | 4 | 116 | 32 | 148 | 78% |
| 1990-91 | 7 | 0 | 0 | 1 | 108 | 40 | 148 | 73% |
| 1991-92 | 7 | 0 | 0 | 5 | 96 | 52 | 148 | 65% |
| 1992-93 | 2 | 0 | 0 | 2 | 92 | 56 | 148 | 62% |
| 1993-94 | 2 | 0 | 0 | 1 | 89 | 59 | 148 | 60% |
| 1994-95 | 5 | 0 | 1 | 2 | 81 | 67 | 148 | 55% |
| 1995-96 | 4 | 0 | 2 | 3 | 72 | 76 | 148 | 49% |
| 1996-97 | 5 | 0 | 0 | 6 | 61 | 87 | 148 | 41% |
| 1997-98 | 5 | 0 | 3 | NA | 53 | 95 | 148 | 36% |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| Total | 54 | 0 | 10 | 31 | 53 | 95 | 148 | 36% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

Table A-8

Enrollment Patterns for 1988-89 Kindergarten Enrollees
All Enrollees

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1988-89 | 214 | 0 | 26 | 180 | 2,947 | 420 | 3,367 | 88% |
| 1989-90 | 133 | 0 | 1 | 129 | 2,684 | 683 | 3,367 | 80% |
| 1990-91 | 89 | 0 | 0 | 79 | 2,516 | 851 | 3,367 | 75% |
| 1991-92 | 94 | 1 | 0 | 93 | 2,328 | 1,039 | 3,367 | 69% |
| 1992-93 | 53 | 0 | 1 | 68 | 2,206 | 1,161 | 3,367 | 66% |
| 1993-94 | 42 | 1 | 1 | 51 | 2,111 | 1,256 | 3,367 | 63% |
| 1994-95 | 43 | 0 | 1 | 85 | 1,982 | 1,385 | 3,367 | 59% |
| 1995-96 | 32 | 0 | 5 | 61 | 1,884 | 1,483 | 3,367 | 56% |
| 1996-97 | 46 | 1 | 9 | 68 | 1,760 | 1,607 | 3,367 | 52% |
| 1997-98 | 56 | 0 | 72 | NA | 1,632 | 1,735 | 3,367 | 48% |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| Total | 802 | 3 | 116 | 814 | 1,632 | 1,735 | 3,367 | 48% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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## Table A-9

### Enrollment Patterns for 1989-90 Kindergarten Enrollees
### Attended "K" Only in Schools Which Had FDK

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1989-90 | 41 | 0 | 4 | 31 | 516 | 76 | 592 | 87% |
| 1990-91 | 22 | 0 | 0 | 17 | 477 | 115 | 592 | 81% |
| 1991-92 | 28 | 0 | 0 | 23 | 426 | 166 | 592 | 72% |
| 1992-93 | 18 | 0 | 1 | 13 | 394 | 198 | 592 | 67% |
| 1993-94 | 6 | 0 | 0 | 11 | 377 | 215 | 592 | 64% |
| 1994-95 | 11 | 0 | 0 | 10 | 356 | 236 | 592 | 60% |
| 1995-96 | 5 | 0 | 1 | 12 | 338 | 254 | 592 | 57% |
| 1996-97 | 10 | 0 | 2 | 17 | 309 | 283 | 592 | 52% |
| 1997-98 | 14 | 0 | 16 | NA | 279 | 313 | 592 | 47% |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| Total | 155 | 0 | 24 | 134 | 279 | 313 | 592 | 47% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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## Table A-10

### Enrollment Patterns for 1989-90 Kindergarten Enrollees
### Attended "K" Only in Schools Which Had HDK

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1989-90 | 179 | 0 | 8 | 152 | 2,693 | 339 | 3,032 | 89% |
| 1990-91 | 90 | 1 | 0 | 120 | 2,482 | 550 | 3,032 | 82% |
| 1991-92 | 104 | 0 | 0 | 104 | 2,274 | 758 | 3,032 | 75% |
| 1992-93 | 86 | 0 | 1 | 82 | 2,105 | 927 | 3,032 | 69% |
| 1993-94 | 45 | 0 | 2 | 70 | 1,988 | 1,044 | 3,032 | 66% |
| 1994-95 | 45 | 0 | 3 | 57 | 1,883 | 1,149 | 3,032 | 62% |
| 1995-96 | 43 | 0 | 1 | 66 | 1,773 | 1,259 | 3,032 | 58% |
| 1996-97 | 35 | 0 | 4 | 68 | 1,666 | 1,366 | 3,032 | 55% |
| 1997-98 | 62 | 0 | 16 | NA | 1,588 | 1,444 | 3,032 | 52% |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| Total | 689 | 1 | 35 | 719 | 1,588 | 1,444 | 3,032 | 52% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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## Table A-11

### Enrollment Patterns for 1989-90 Kindergarten Enrollees
### Attended "K" in Both Types of Schools

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1989-90 | 7 | 0 | 2 | 4 | 113 | 13 | 126 | 90% |
| 1990-91 | 6 | 0 | 0 | 0 | 107 | 19 | 126 | 85% |
| 1991-92 | 4 | 0 | 0 | 7 | 96 | 30 | 126 | 76% |
| 1992-93 | 3 | 0 | 0 | 2 | 91 | 35 | 126 | 72% |
| 1993-94 | 1 | 0 | 0 | 1 | 89 | 37 | 126 | 71% |
| 1994-95 | 3 | 0 | 0 | 3 | 83 | 43 | 126 | 66% |
| 1995-96 | 1 | 0 | 0 | 2 | 80 | 46 | 126 | 63% |
| 1996-97 | 3 | 0 | 0 | 3 | 74 | 52 | 126 | 59% |
| 1997-98 | 4 | 0 | 2 | NA | 68 | 58 | 126 | 54% |
| 1996-97 | -- | -- | -- | -- | -- | -- | -- | -- |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| Total | 32 | 0 | 4 | 22 | 68 | 58 | 126 | 54% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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## Table A-12

### Enrollment Patterns for 1989-90 Kindergarten Enrollees
### All Enrollees

| School Year | Transfer | Death | Drop Out | Summer Leaver | Continuing | Cumulative Left ASD | Total Start | Percent Still in ASD |
|---|---|---|---|---|---|---|---|---|
| 1989-90 | 227 | 0 | 14 | 187 | 3,322 | 428 | 3,750 | 89% |
| 1990-91 | 118 | 1 | 0 | 137 | 3,066 | 684 | 3,750 | 82% |
| 1991-92 | 136 | 0 | 0 | 134 | 2,796 | 954 | 3,750 | 75% |
| 1992-93 | 107 | 0 | 2 | 97 | 2,590 | 1,160 | 3,750 | 69% |
| 1993-94 | 52 | 0 | 2 | 82 | 2,454 | 1,296 | 3,750 | 65% |
| 1994-95 | 59 | 0 | 3 | 70 | 2,322 | 1,428 | 3,750 | 62% |
| 1995-96 | 49 | 0 | 2 | 80 | 2,191 | 1,559 | 3,750 | 58% |
| 1996-97 | 48 | 0 | 6 | 88 | 2,049 | 1,701 | 3,750 | 55% |
| 1997-98 | 80 | 0 | 34 | NA | 1,935 | 1,815 | 3,750 | 52% |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| -- -- | -- | -- | -- | -- | -- | -- | -- | |
| Total | 876 | 1 | 63 | 875 | 1,935 | 1,815 | 3,750 | 52% |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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# Appendix B

## Annual "Drop-Out" Information for 1987-88, 1988-89, and 1989-90 Kindergarten Cohorts in Years Following Kindergarten

## Table B-1

### "Drop-Out" Patterns for 1987-88 Kindergarten Enrollees Attended "K" Only in Schools Which Became FDK in 1988-89

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1987-88 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 1988-89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989-90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| **1993-94** | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1994-95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1995-96** | **0** | **1** | **0** | **0** | **0** | **3** | **4** |
| 1996-97 | 0 | 0 | 0 | 1 | 0 | 5 | 6 |
| 1997-98 | 0 | 1 | 2 | 3 | 1 | 18 | 25 |
| Total | 1 | 2 | 2 | 5 | 1 | 28 | 39 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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## Table B-2

### "Drop-Out" Patterns for 1987-88 Kindergarten Enrollees Attended "K" Only in Schools Which Remained HDK in 1988-89

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1987-88 | 0 | 2 | 0 | 6 | 1 | 5 | 14 |
| 1988-89 | 0 | 0 | 0 | 1 | 0 | 4 | 5 |
| 1989-90 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1990-91 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1993-94** | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 1994-95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1995-96** | **0** | **1** | **0** | **0** | **0** | **3** | **4** |
| 1996-97 | 0 | 0 | 4 | 0 | 0 | 17 | 21 |
| 1997-98 | 1 | 9 | 3 | 13 | 4 | 60 | 90 |
| Total | 1 | 12 | 7 | 21 | 5 | 92 | 138 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

Table B-3

"Drop-Out" Patterns for 1987-88 Kindergarten Enrollees
Attended "K" in Both Types of Schools

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1987-88 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1988-89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989-90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993-94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994-95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995-96 | 0 | 1 | 0 | 0 | 0 | 1 | 2 |
| 1996-97 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1997-98 | 0 | 1 | 1 | 0 | 0 | 11 | 13 |
| Total | 0 | 2 | 1 | 1 | 0 | 13 | 17 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

Table B-4

"Drop-Out" Patterns for 1987-88 Kindergarten Enrollees
All Enrollees

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1987-88 | 0 | 2 | 0 | 8 | 1 | 6 | 17 |
| 1988-89 | 0 | 0 | 0 | 1 | 0 | 4 | 5 |
| 1989-90 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1990-91 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1993-94 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| 1994-95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995-96 | 0 | 3 | 0 | 0 | 0 | 7 | 10 |
| 1996-97 | 0 | 0 | 4 | 1 | 0 | 23 | 28 |
| 1997-98 | 1 | 11 | 6 | 16 | 5 | 89 | 128 |
| Total | 2 | 16 | 10 | 27 | 6 | 133 | 194 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

Eighth Grade Year for Students following "Normal Matriculation Pattern.

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## Table B-5

"Drop-Out" Patterns for 1988-89 Kindergarten Enrollees
Attended "K" Only in Schools Which Had FDK

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1988-89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989-90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993-94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1994-95** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| 1995-96 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| **1996-97** | **0** | **0** | **0** | **0** | **0** | **2** | **2** |
| 1997-98 | 0 | 2 | 4 | 0 | 0 | 16 | 22 |
| -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 0 | 2 | 4 | 0 | 0 | 19 | 25 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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## Table B-6

"Drop-Out" Patterns for 1988-89 Kindergarten Enrollees
Attended "K" Only in Schools Which Had HDK

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1988-89 | 0 | 0 | 0 | 14 | 0 | 9 | 23 |
| 1989-90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1993-94 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| **1994-95** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| 1995-96 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **1996-97** | **0** | **1** | **1** | **1** | **0** | **4** | **7** |
| 1997-98 | 1 | 4 | 4 | 8 | 0 | 30 | 47 |
| -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 1 | 5 | 5 | 25 | 0 | 45 | 81 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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## Table B-7

### "Drop-Out" Patterns for 1988-89 Kindergarten Enrollees
### Attended "K" in Both Types of Schools

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1988-89 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| 1989-90 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993-94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994-95 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1995-96 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **1996-97** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| 1997-98 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 0 | 0 | 0 | 0 | 0 | 10 | 10 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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## Table B-8

### "Drop-Out" Patterns for 1988-89 Kindergarten Enrollees
### All Enrollees

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1988-89 | 0 | 0 | 0 | 14 | 0 | 12 | 26 |
| 1989-90 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1993-94 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1994-95 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1995-96 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| **1996-97** | **0** | **1** | **1** | **1** | **0** | **6** | **9** |
| 1997-98 | 1 | 6 | 8 | 8 | 0 | 49 | 72 |
| -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 1 | 7 | 9 | 25 | 0 | 74 | 116 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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Table B-9

"Drop-Out" Patterns for 1989-90 Kindergarten Enrollees
Attended "K" Only in Schools Which Had FDK

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1989-90 | 0 | 0 | 0 | 1 | 0 | 3 | 4 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1993-94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994-95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995-96 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1996-97 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **1997-98** | **0** | **3** | **1** | **2** | **0** | **10** | **16** |
| -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 0 | 3 | 1 | 3 | 0 | 17 | 24 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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Table B-10

"Drop-Out" Patterns for 1989-90 Kindergarten Enrollees
Attended "K" Only in Schools Which Had HDK

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1989-90 | 0 | 0 | 0 | 2 | 0 | 6 | 8 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1993-94 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 1994-95 | 0 | 0 | 0 | 1 | 0 | 2 | 3 |
| 1995-96 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1996-97 | 0 | 0 | 1 | 1 | 1 | 1 | 4 |
| **1997-98** | **0** | **5** | **1** | **4** | **0** | **6** | **16** |
| -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 0 | 5 | 2 | 9 | 1 | 18 | 35 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

## Table B-11

"Drop-Out" Patterns for 1989-90 Kindergarten Enrollees
Attended "K" in Both Types of Schools

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1989-90 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993-94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994-95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995-96 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996-97 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997-98 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 0 | 0 | 0 | 2 | 0 | 2 | 4 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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## Table B-12

"Drop-Out" Patterns for 1989-90 Kindergarten Enrollees
All Enrollees

| School Year | Recorded Reasons for "Drop-Out" | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illness | Academic Difficulty | Behavior Difficulty | Parental Influence | Refer to Other Agency | Dropped Non-Attendance | Grand Total |
| 1989-90 | 0 | 0 | 0 | 4 | 0 | 10 | 14 |
| 1990-91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991-92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992-93 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 1993-94 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 1994-95 | 0 | 0 | 0 | 1 | 0 | 2 | 3 |
| 1995-96 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 1996-97 | 0 | 0 | 1 | 1 | 1 | 3 | 6 |
| 1997-98 | 0 | 8 | 2 | 7 | 0 | 17 | 34 |
| -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 0 | 8 | 3 | 14 | 1 | 37 | 63 |

Sixth Grade Year for students following "Normal" Matriculation Pattern.

**Eighth Grade Year for Students following "Normal Matriculation Pattern.**

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# Appendix C

## Grade Level Retention Information Through 1997-98 for Kindergarten Cohorts from 1987-88, 1988-89, and 1989-90

Table C-1

Grade Level Movement Information through 1997-98
1987-88, 1988-89, and 1989-90 Kindergarten Enrollees

| Year<br>"K" Program Type | Total Enrollees | Movement per Years of Enrollment | | | | | |
|---|---|---|---|---|---|---|---|
| | | < 1 Grade Level | | = 1 Grade Level | | > 1 Grade Level | |
| | | Number | Percent | Number | Percent | Number | Percent |
| 1987-88 | | | | | | | |
| FDK Schools | 521 | 134 | 26% | 386 | 74% | 1 | <1% |
| HDK Schools | 3,219 | 528 | 16% | 2,684 | 83% | 7 | <1% |
| Both Types | 141 | 46 | 33% | 94 | 67% | 1 | 1% |
| All Enrollees | 3,881 | 708 | 18% | 3,164 | 82% | 9 | <1% |
| 1988-89 | | | | | | | |
| FDK Schools | 519 | 108 | 21% | 410 | 79% | 1 | <1% |
| HDK Schools | 2,700 | 402 | 15% | 2,291 | 85% | 7 | <1% |
| Both Types | 148 | 40 | 27% | 106 | 72% | 2 | 1% |
| All Enrollees | 3,367 | 550 | 16% | 2,807 | 83% | 10 | <1% |
| 1988-89 | | | | | | | |
| FDK Schools | 592 | 117 | 20% | 470 | 79% | 5 | 1% |
| HDK Schools | 3,032 | 451 | 15% | 2,564 | 85% | 17 | 1% |
| Both Types | 126 | 26 | 21% | 100 | 79% | 0 | 0% |
| All Enrollees | 3,750 | 594 | 16% | 3,134 | 84% | 22 | 1% |

## Table C-2

## Grade Level of First Retention
## 1987-88, 1988-89, and 1989-90 Kindergarten Enrollees

| | | Grade Level of First Retention | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Year "K" Program Type | Total Enrollees | Kindergarten | | Grade 1 or in Mod. Prim. | | Grades 2-6 | | Grades 7-10 | |
| | | # | % | # | % | # | % | # | % |
| 1987-88 | | | | | | | | | |
| FDK Schools | 521 | 12 | 2% | 88 | 17% | 17 | 3% | 17 | 3% |
| HDK Schools | 3,219 | 58 | 2% | 359 | 11% | 73 | 2% | 38 | 1% |
| Both Types | 141 | 6 | 4% | 26 | 18% | 7 | 5% | 7 | 5% |
| All Enrollees | 3,881 | 76 | 2% | 473 | 12% | 97 | 2% | 62 | 2% |
| 1988-89 | | | | | | | | | |
| FDK Schools | 519 | 4 | 1% | 69 | 13% | 17 | 3% | 18 | 3% |
| HDK Schools | 2,700 | 19 | 1% | 299 | 11% | 40 | 1% | 44 | 2% |
| Both Types | 148 | 0 | 0% | 33 | 22% | 3 | 2% | 4 | 3% |
| All Enrollees | 3,367 | 23 | 1% | 401 | 12% | 60 | 2% | 66 | 2% |
| 1988-89 | | | | | | | | | |
| FDK Schools | 592 | 12 | 2% | 68 | 11% | 9 | 2% | 28 | 5% |
| HDK Schools | 3,032 | 26 | 1% | 326 | 11% | 46 | 2% | 53 | 2% |
| Both Types | 126 | 1 | 1% | 19 | 15% | 0 | 0% | 6 | 5% |
| All Enrollees | 3,750 | 39 | 1% | 413 | 11% | 55 | 1% | 87 | 2% |

## Appendix D

## Special Education Placements Through 1997-98 for Kindergarten Cohorts from 1987-88, 1988-89, and 1989-90

# Table D-1

## Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
Students Whose First Kindergarten Year Was 1987-88

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Annual Enrollment | 1 | 448 | 100% | 2,812 | 100% | 125 | 100% | 3,385 | 100% |
| | 2 | 399 | 100% | 2,525 | 100% | 107 | 100% | 3,030 | 100% |
| | 3 | 365 | 100% | 2,321 | 100% | 101 | 100% | 2,787 | 100% |
| | 4 | 342 | 100% | 2,178 | 100% | 95 | 100% | 2,615 | 100% |
| | 5 | 322 | 100% | 2,059 | 100% | 91 | 100% | 2,472 | 100% |
| | 6 | 311 | 100% | 1,942 | 100% | 89 | 100% | 2,342 | 100% |
| | 7 | 297 | 100% | 1,841 | 100% | 87 | 100% | 2,225 | 100% |
| | 8 | 283 | 100% | 1,755 | 100% | 81 | 100% | 2,119 | 100% |
| | 9 | 254 | 100% | 1,661 | 100% | 73 | 100% | 1,988 | 100% |
| | 10 | 235 | 100% | 1,554 | 100% | 71 | 100% | 1,860 | 100% |
| Mentally Retarded | 1 | 1 | <1% | 1 | <1% | 1 | <1% | 3 | <1% |
| | 2 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| | 3 | 1 | <1% | 2 | <1% | 1 | 1% | 4 | <1% |
| | 4 | 1 | <1% | 3 | <1% | 1 | 1% | 5 | <1% |
| | 5 | 1 | <1% | 2 | <1% | 1 | 1% | 4 | <1% |
| | 6 | 1 | <1% | 3 | <1% | 1 | 1% | 5 | <1% |
| | 7 | 1 | <1% | 5 | <1% | 1 | 1% | 7 | <1% |
| | 8 | 1 | <1% | 3 | <1% | 0 | 0% | 4 | <1% |
| | 9 | 3 | 1% | 2 | <1% | 0 | 0% | 5 | <1% |
| | 10 | 2 | 1% | 2 | <1% | 1 | 1% | 5 | <1% |
| Learning Disabled | 1 | 30 | 7% | 145 | 5% | 10 | 8% | 185 | 5% |
| | 2 | 44 | 11% | 216 | 9% | 15 | 14% | 275 | 9% |
| | 3 | 42 | 12% | 234 | 10% | 17 | 17% | 293 | 11% |
| | 4 | 43 | 13% | 268 | 12% | 18 | 19% | 329 | 13% |
| | 5 | 36 | 11% | 250 | 12% | 16 | 18% | 302 | 12% |
| | 6 | 32 | 10% | 230 | 12% | 12 | 13% | 274 | 12% |
| | 7 | 33 | 11% | 202 | 11% | 11 | 13% | 246 | 11% |
| | 8 | 32 | 11% | 184 | 10% | 10 | 12% | 226 | 11% |
| | 9 | 25 | 10% | 170 | 10% | 7 | 10% | 202 | 10% |
| | 10 | 23 | 10% | 151 | 10% | 9 | 13% | 183 | 10% |
| Emotionally Disturbed | 1 | 2 | <1% | 1 | <1% | 0 | 0% | 3 | <1% |
| | 2 | 2 | 1% | 2 | <1% | 0 | 0% | 4 | <1% |
| | 3 | 2 | 1% | 1 | <1% | 0 | 0% | 3 | <1% |
| | 4 | 1 | <1% | 7 | <1% | 0 | 0% | 8 | <1% |
| | 5 | 3 | 1% | 9 | <1% | 0 | 0% | 12 | <1% |
| | 6 | 5 | 2% | 15 | 1% | 1 | 1% | 21 | 1% |
| | 7 | 7 | 2% | 18 | 1% | 1 | 1% | 26 | 1% |
| | 8 | 5 | 2% | 20 | 1% | 2 | 2% | 27 | 1% |
| | 9 | 7 | 3% | 26 | 2% | 3 | 4% | 36 | 2% |
| | 10 | 6 | 3% | 23 | 1% | 3 | 4% | 32 | 2% |

Table D-1 (Continued)

Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
Students Whose First Kindergarten Year Was 1987-88

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Orthopedically Handicapped | 1 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| | 2 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 3 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 4 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 5 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| | 6 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| | 7 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 8 | 0 | 0% | 3 | <1% | 1 | 1% | 4 | <1% |
| | 9 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 10 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| Speech Impaired | 1 | 38 | 8% | 161 | 6% | 10 | 8% | 209 | 6% |
| | 2 | 25 | 6% | 137 | 5% | 9 | 8% | 171 | 6% |
| | 3 | 16 | 4% | 88 | 4% | 6 | 6% | 110 | 4% |
| | 4 | 18 | 5% | 88 | 4% | 8 | 8% | 114 | 4% |
| | 5 | 18 | 6% | 49 | 2% | 6 | 7% | 73 | 3% |
| | 6 | 14 | 3% | 24 | 1% | 3 | 2% | 41 | 1% |
| | 7 | 6 | 2% | 9 | <1% | 2 | 2% | 17 | 1% |
| | 8 | 6 | 2% | 6 | <1% | 1 | 1% | 13 | 1% |
| | 9 | 3 | 1% | 3 | <1% | 1 | 1% | 7 | <1% |
| | 10 | 3 | 1% | . | <1% | 1 | 1% | 6 | <1% |
| Visually Impaired | 1 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 2 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 9 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 10 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| Health Impaired | 1 | 0 | 0% | 4 | <1% | 1 | <1% | 5 | <1% |
| | 2 | 1 | <1% | 4 | <1% | 0 | 0% | 5 | <1% |
| | 3 | 0 | 0% | 4 | <1% | 0 | 0% | 4 | <1% |
| | 4 | 1 | <1% | 3 | <1% | 0 | 0% | 4 | <1% |
| | 5 | 1 | <1% | 4 | <1% | 0 | 0% | 5 | <1% |
| | 6 | 1 | <1% | 5 | <1% | 0 | 0% | 6 | <1% |
| | 7 | 1 | <1% | 6 | <1% | 1 | 1% | 8 | <1% |
| | 8 | 1 | <1% | 4 | <1% | 1 | 1% | 6 | <1% |
| | 9 | 1 | <1% | 4 | <1% | 1 | 1% | 6 | <1% |
| | 10 | 1 | <1% | 5 | <1% | 1 | 1% | 7 | <1% |

Table D-1 (Continued)

Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
Students Whose First Kindergarten Year Was 1987-88

| Exceptionality | Years After First "K" | FKD Schools Num. | FKD Schools Per. | HDK Schools Num. | HDK Schools Per. | Both Types Num. | Both Types Per. | Totals Num. | Totals Per. |
|---|---|---|---|---|---|---|---|---|---|
| Hard of Hearing | 1 | 1 | <1% | 1 | <1% | 1 | 1% | 3 | <1% |
| | 2 | 2 | 1% | 1 | <1% | 0 | 0% | 3 | <1% |
| | 3 | 1 | <1% | 2 | <1% | 0 | 0% | 3 | <1% |
| | 4 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| | 5 | 1 | <1% | 2 | <1% | 0 | 0% | 3 | <1% |
| | 6 | 1 | <1% | 4 | <1% | 0 | 0% | 5 | <1% |
| | 7 | 1 | <1% | 3 | <1% | 0 | 0% | 4 | <1% |
| | 8 | 1 | <1% | 3 | <1% | 0 | 0% | 4 | <1% |
| | 9 | 1 | <1% | 3 | <1% | 0 | 0% | 4 | <1% |
| | 10 | 1 | <1% | 3 | <1% | 0 | 0% | 4 | <1% |
| Deaf | 1 | 0 | 0% | 5 | <1% | 1 | 1% | 6 | <1% |
| | 2 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 3 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 4 | 0 | 0% | 2 | <1% | 1 | 1% | 3 | <1% |
| | 5 | 0 | 0% | 3 | <1% | 1 | 1% | 4 | <1% |
| | 6 | 0 | 0% | 2 | <1% | 1 | 1% | 3 | <1% |
| | 7 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| | 8 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| | 9 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| | 10 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| Deaf/Blind | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 9 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 10 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Multihandicapped | 1 | 7 | 2% | 0 | 0% | 0 | 0% | 7 | <1% |
| | 2 | 7 | 2% | 1 | <1% | 1 | 1% | 9 | <1% |
| | 3 | 6 | 2% | 1 | <1% | 1 | 1% | 8 | <1% |
| | 4 | 5 | 1% | 2 | <1% | 1 | 1% | 8 | <1% |
| | 5 | 5 | 2% | 1 | <1% | 1 | 1% | 7 | <1% |
| | 6 | 4 | 1% | 1 | <1% | 1 | 1% | 6 | <1% |
| | 7 | 4 | 1% | 1 | <1% | 1 | 1% | 6 | <1% |
| | 8 | 4 | 1% | 0 | 0% | 1 | 1% | 5 | <1% |
| | 9 | 4 | 2% | 0 | 0% | 1 | 1% | 5 | <1% |
| | 10 | 4 | 2% | 0 | 0% | 1 | 1% | 5 | <1% |

## Table D-1 (Continued)

## Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
## Students Whose First Kindergarten Year Was 1987-88

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Developmental Delay | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 9 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 10 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Traumatic Brain Injury | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 9 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 10 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Autism | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 9 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 10 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Gifted | 1 | 0 | 0% | 13 | <1% | 0 | 0% | 13 | <1% |
| | 2 | 3 | 1% | 55 | 2% | 0 | 0% | 58 | 2% |
| | 3 | 9 | 2% | 100 | 4% | 1 | 1% | 110 | 4% |
| | 4 | 16 | 5% | 128 | 6% | 1 | 1% | 145 | 6% |
| | 5 | 16 | 5% | 152 | 7% | 2 | 2% | 170 | 7% |
| | 6 | 17 | 5% | 174 | 9% | 3 | 3% | 194 | 8% |
| | 7 | 18 | 6% | 166 | 9% | 2 | 2% | 186 | 8% |
| | 8 | 19 | 7% | 175 | 9% | 1 | 1% | 185 | 9% |
| | 9 | 0 | 0% | 7 | <1% | 0 | 0% | 7 | <1% |
| | 10 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |

Table D-1 (Continued)

Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
Students Whose First Kindergarten Year Was 1987-88

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| No Exceptionality | 1 | 369 | 82% | 2,478 | 88% | 101 | 81% | 2,948 | 87% |
| | 2 | 314 | 79% | 2,102 | 83% | 82 | 77% | 2,498 | 82% |
| | 3 | 288 | 79% | 1,885 | 81% | 75 | 74% | 2,248 | 81% |
| | 4 | 256 | 75% | 1,675 | 77% | 65 | 68% | 1,996 | 76% |
| | 5 | 241 | 75% | 1,585 | 77% | 64 | 70% | 1,890 | 76% |
| | 6 | 236 | 76% | 1,482 | 76% | 67 | 75% | 1,785 | 76% |
| | 7 | 226 | 76% | 1,429 | 78% | 67 | 77% | 1,722 | 77% |
| | 8 | 214 | 76% | 1,365 | 78% | 63 | 78% | 1,642 | 77% |
| | 9 | 210 | 83% | 1,441 | 87% | 59 | 81% | 1,710 | 86% |
| | 10 | 195 | 83% | 1,360 | 88% | 54 | 76% | 1,609 | 87% |

Table D-2

Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
Students Whose First Kindergarten Year Was 1988-89

|  | Years After | FKD Schools |  | HDK Schools |  | Both Types |  | Totals |  |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Annual Enrollment | 1 | 444 | 100% | 2,373 | 100% | 130 | 100% | 2,947 | 100% |
|  | 2 | 405 | 100% | 2,163 | 100% | 116 | 100% | 2,684 | 100% |
|  | 3 | 388 | 100% | 2,020 | 100% | 108 | 100% | 2,516 | 100% |
|  | 4 | 359 | 100% | 1,873 | 100% | 96 | 100% | 2,328 | 100% |
|  | 5 | 343 | 100% | 1,771 | 100% | 92 | 100% | 2,206 | 100% |
|  | 6 | 324 | 100% | 1,698 | 100% | 89 | 100% | 2,111 | 100% |
|  | 7 | 309 | 100% | 1,592 | 100% | 81 | 100% | 1,982 | 100% |
|  | 8 | 292 | 100% | 1,520 | 100% | 72 | 100% | 1,884 | 100% |
|  | 9 | 273 | 100% | 1,426 | 100% | 61 | 100% | 1,760 | 100% |
| Mentally Retarded | 1 | 0 | 0% | 4 | <1% | 1 | 1% | 5 | <1% |
|  | 2 | 1 | <1% | 4 | <1% | 0 | 0% | 5 | <1% |
|  | 3 | 2 | 1% | 7 | <1% | 0 | 0% | 9 | <1% |
|  | 4 | 2 | 1% | 8 | <1% | 0 | 0% | 10 | <1% |
|  | 5 | 0 | 0% | 7 | <1% | 0 | 0% | 7 | <1% |
|  | 6 | 1 | <1% | 6 | <1% | 0 | 0% | 7 | <1% |
|  | 7 | 1 | <1% | 6 | <1% | 0 | 0% | 7 | <1% |
|  | 8 | 1 | <1% | 7 | <1% | 0 | 0% | 8 | <1% |
|  | 9 | 1 | <1% | 8 | 1% | 1 | 2% | 10 | 1% |
| Learning Disabled | 1 | 44 | 10% | 138 | 6% | 17 | 13% | 199 | 7% |
|  | 2 | 51 | 13% | 190 | 9% | 20 | 17% | 261 | 10% |
|  | 3 | 58 | 15% | 227 | 11% | 22 | 20% | 307 | 12% |
|  | 4 | 58 | 16% | 225 | 12% | 25 | 26% | 308 | 13% |
|  | 5 | 53 | 15% | 214 | 12% | 20 | 22% | 287 | 13% |
|  | 6 | 58 | 18% | 195 | 11% | 20 | 22% | 273 | 13% |
|  | 7 | 55 | 18% | 173 | 11% | 16 | 20% | 244 | 12% |
|  | 8 | 53 | 18% | 160 | 11% | 14 | 19% | 227 | 12% |
|  | 9 | 49 | 18% | 147 | 10% | 10 | 16% | 206 | 12% |
| Emotionally Disturbed | 1 | 2 | <1% | 2 | <1% | 0 | 0% | 4 | <1% |
|  | 2 | 3 | 1% | 5 | <1% | 0 | 0% | 8 | <1% |
|  | 3 | 3 | 1% | 6 | <1% | 1 | 1% | 10 | <1% |
|  | 4 | 5 | 1% | 8 | <1% | 2 | 2% | 15 | 1% |
|  | 5 | 6 | 2% | 11 | 1% | 2 | 2% | 19 | 1% |
|  | 6 | 7 | 2% | 14 | 1% | 3 | 3% | 24 | 1% |
|  | 7 | 8 | 3% | 17 | 1% | 4 | 5% | 29 | 1% |
|  | 8 | 10 | 3% | 19 | 1% | 3 | 4% | 32 | 2% |
|  | 9 | 9 | 3% | 19 | 1% | 2 | 3% | 30 | 2% |

Table D-2 (Continued)

Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
Students Whose First Kindergarten Year Was 1988-89

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Orthopedically Handicapped | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 4 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 5 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 6 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 7 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 8 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 9 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| Speech Impaired | 1 | 37 | 8% | 121 | 5% | 4 | 3% | 162 | 5% |
| | 2 | 26 | 6% | 114 | 5% | 4 | 3% | 144 | 5% |
| | 3 | 29 | 7% | 120 | 6% | 6 | 6% | 155 | 6% |
| | 4 | 19 | 5% | 67 | 4% | 6 | 6% | 92 | 4% |
| | 5 | 15 | 4% | 46 | 3% | 5 | 5% | 66 | 3% |
| | 6 | 5 | 1% | 24 | 1% | 2 | 2% | 31 | 1% |
| | 7 | 2 | 1% | 8 | 1% | 1 | 1% | 11 | 1% |
| | 8 | 1 | <1% | 2 | <1% | 1 | 1% | 4 | <1% |
| | 9 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| Visually Impaired | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 9 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Health Impaired | 1 | 2 | <1% | 3 | <1% | 0 | 0% | 5 | <1% |
| | 2 | 3 | 1% | 3 | <1% | 0 | 0% | 6 | <1% |
| | 3 | 2 | 1% | 3 | <1% | 0 | 0% | 5 | <1% |
| | 4 | 2 | 1% | 2 | <1% | 0 | 0% | 4 | <1% |
| | 5 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| | 6 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| | 7 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| | 8 | 2 | <1% | 0 | 0% | 0 | 0% | 2 | <1% |
| | 9 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |

Table D-2 (Continued)

## Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
## Students Whose First Kindergarten Year Was 1988-89

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Hard of Hearing | 1 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| | 2 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 3 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 4 | 0 | 0% | 4 | <1% | 1 | 1% | 5 | <1% |
| | 5 | 0 | 0% | 3 | <1% | 1 | 1% | 4 | <1% |
| | 6 | 0 | 0% | 3 | <1% | 1 | 1% | 4 | <1% |
| | 7 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| | 8 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| | 9 | 0 | 0% | 1 | <1% | 1 | 2% | 2 | <1% |
| Deaf | 1 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| | 2 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 3 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 4 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 5 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 6 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 7 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| | 8 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| | 9 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| Deaf/Blind | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 9 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Multihandicapped | 1 | 5 | 1% | 6 | <1% | 0 | 0% | 11 | <1% |
| | 2 | 4 | 1% | 6 | <1% | 0 | 0% | 10 | <1% |
| | 3 | 4 | 1% | 5 | <1% | 0 | 0% | 9 | <1% |
| | 4 | 3 | 1% | 5 | <1% | 0 | 0% | 8 | <1% |
| | 5 | 3 | 1% | 4 | <1% | 0 | 0% | 7 | <1% |
| | 6 | 3 | 1% | 4 | <1% | 0 | 0% | 7 | <1% |
| | 7 | 3 | 1% | 5 | <1% | 0 | 0% | 8 | <1% |
| | 8 | 3 | 1% | 4 | <1% | 0 | 0% | 7 | <1% |
| | 9 | 2 | 1% | 2 | <1% | 0 | 0% | 4 | <1% |

Table D-2 (Continued)

Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
Students Whose First Kindergarten Year Was 1988-89

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Developmental Delay | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 9 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Traumatic Brain Injury | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 5 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 6 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 9 | 0 | 0% | 2 | <1% | 0 | 0% | 2 | <1% |
| Autism | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 5 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 6 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 7 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 8 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 9 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| Gifted | 1 | 3 | 1% | 15 | 1% | 0 | 0% | 18 | 1% |
| | 2 | 9 | 2% | 38 | 2% | 0 | 0% | 47 | 2% |
| | 3 | 19 | 5% | 112 | 6% | 1 | 1% | 132 | 5% |
| | 4 | 21 | 6% | 143 | 8% | 1 | 1% | 165 | 7% |
| | 5 | 31 | 9% | 159 | 9% | 2 | 2% | 192 | 9% |
| | 6 | 27 | 8% | 170 | 10% | 2 | 2% | 199 | 9% |
| | 7 | 18 | 6% | 173 | 11% | 2 | 2% | 193 | 10% |
| | 8 | 15 | 5% | 169 | 11% | 2 | 3% | 186 | 10% |
| | 9 | 1 | <1% | 5 | <1% | 0 | 0% | 6 | <1% |

Table D-2 (Continued)

Number and Percent of Continuing ASD Enrollees Identified with Specific
Special Education Needs
Students Whose First Kindergarten Year Was 1988-89

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| No Exceptionality | 1 | 351 | 79% | 2,080 | 88% | 108 | 83% | 2,539 | 86% |
| | 2 | 308 | 76% | 1,799 | 83% | 92 | 79% | 2,199 | 82% |
| | 3 | 271 | 70% | 1,535 | 76% | 78 | 72% | 1,884 | 75% |
| | 4 | 249 | 69% | 1,407 | 75% | 61 | 64% | 1,717 | 74% |
| | 5 | 234 | 68% | 1,322 | 75% | 62 | 67% | 1,618 | 73% |
| | 6 | 222 | 69% | 1,277 | 75% | 61 | 69% | 1,560 | 74% |
| | 7 | 221 | 72% | 1,204 | 76% | 57 | 70% | 1,482 | 75% |
| | 8 | 207 | 71% | 1,153 | 76% | 51 | 71% | 1,411 | 75% |
| | 9 | 209 | 77% | 1,235 | 87% | 47 | 77% | 1,491 | 85% |

## Table D-3

### Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
### Students Whose First Kindergarten Year Was 1989-90

| Exceptionality | Years After First "K" | FKD Schools Num. | FKD Schools Per. | HDK Schools Num. | HDK Schools Per. | Both Types Num. | Both Types Per. | Totals Num. | Totals Per. |
|---|---|---|---|---|---|---|---|---|---|
| Annual Enrollment | 1 | 516 | 100% | 2,693 | 100% | 113 | 100% | 3,322 | 100% |
| | 2 | 477 | 100% | 2,482 | 100% | 107 | 100% | 3,066 | 100% |
| | 3 | 426 | 100% | 2,274 | 100% | 96 | 100% | 2,796 | 100% |
| | 4 | 394 | 100% | 2,105 | 100% | 91 | 100% | 2,590 | 100% |
| | 5 | 377 | 100% | 1,988 | 100% | 89 | 100% | 2,454 | 100% |
| | 6 | 356 | 100% | 1,883 | 100% | 83 | 100% | 2,322 | 100% |
| | 7 | 338 | 100% | 1,773 | 100% | 80 | 100% | 2,191 | 100% |
| | 8 | 309 | 100% | 1,666 | 100% | 74 | 100% | 2,049 | 100% |
| Mentally Retarded | 1 | 4 | 1% | 2 | <1% | 1 | 1% | 7 | <1% |
| | 2 | 2 | <1% | 1 | <1% | 1 | 1% | 4 | <1% |
| | 3 | 4 | 1% | 1 | <1% | 1 | 1% | 6 | <1% |
| | 4 | 4 | 1% | 2 | <1% | 1 | 1% | 7 | <1% |
| | 5 | 4 | 1% | 3 | <1% | 1 | 1% | 8 | <1% |
| | 6 | 4 | 1% | 4 | <1% | 2 | 2% | 10 | <1% |
| | 7 | 4 | 1% | 4 | <1% | 2 | 3% | 10 | <1% |
| | 8 | 3 | 1% | 4 | <1% | 2 | 3% | 9 | <1% |
| Learning Disabled | 1 | 33 | 6% | 153 | 6% | 10 | 9% | 196 | 6% |
| | 2 | 44 | 9% | 222 | 9% | 15 | 14% | 281 | 9% |
| | 3 | 61 | 14% | 244 | 11% | 12 | 13% | 317 | 11% |
| | 4 | 60 | 15% | 257 | 12% | 14 | 15% | 331 | 13% |
| | 5 | 53 | 14% | 252 | 13% | 18 | 20% | 323 | 13% |
| | 6 | 48 | 13% | 232 | 12% | 19 | 23% | 299 | 13% |
| | 7 | 45 | 13% | 204 | 12% | 19 | 24% | 268 | 12% |
| | 8 | 42 | 14% | 183 | 11% | 14 | 19% | 239 | 12% |
| Emotionally Disturbed | 1 | 1 | <1% | 3 | <1% | 2 | 2% | 6 | <1% |
| | 2 | 3 | 1% | 9 | <1% | 3 | 3% | 15 | <1% |
| | 3 | 4 | 1% | 11 | <1% | 5 | 5% | 20 | 1% |
| | 4 | 4 | 1% | 11 | 1% | 6 | 7% | 21 | 1% |
| | 5 | 5 | 1% | 11 | 1% | 6 | 7% | 22 | 1% |
| | 6 | 5 | 1% | 13 | 1% | 5 | 6% | 23 | 1% |
| | 7 | 6 | 2% | 15 | 1% | 5 | 6% | 26 | 1% |
| | 8 | 5 | 2% | 14 | 1% | 4 | 5% | 23 | 1% |

## Table D-3 (Continued)

### Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
### Students Whose First Kindergarten Year Was 1989-90

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Orthopedically Handicapped | 1 | 4 | 1% | 1 | <1% | 0 | 0% | 5 | <1% |
| | 2 | 3 | 1% | 1 | <1% | 0 | 0% | 4 | <1% |
| | 3 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Speech Impaired | 1 | 35 | 7% | 183 | 7% | 5 | 3% | 223 | 7% |
| | 2 | 32 | 7% | 197 | 8% | 5 | 5% | 234 | 8% |
| | 3 | 24 | 6% | 168 | 7% | 5 | 5% | 197 | 7% |
| | 4 | 15 | 4% | 112 | 5% | 3 | 3% | 130 | 5% |
| | 5 | 8 | 2% | 53 | 3% | 2 | 2% | 63 | 3% |
| | 6 | 3 | 1% | 22 | 1% | 1 | 1% | 26 | 1% |
| | 7 | 1 | <1% | 7 | <1% | 0 | 0% | 8 | <1% |
| | 8 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| Visually Impaired | 1 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 2 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 3 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 4 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 5 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 6 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 7 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 8 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| Health Impaired | 1 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 2 | 0 | 0% | 4 | <1% | 0 | 0% | 4 | <1% |
| | 3 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 4 | 0 | 0% | 4 | <1% | 0 | 0% | 4 | <1% |
| | 5 | 0 | 0% | 4 | <1% | 1 | 1% | 5 | <1% |
| | 6 | 0 | 0% | 5 | <1% | 1 | 1% | 6 | <1% |
| | 7 | 1 | <1% | 6 | <1% | 1 | 1% | 8 | <1% |
| | 8 | 2 | 1% | 6 | <1% | 1 | 1% | 9 | <1% |

Table D-3 (Continued)

Number and Percent of Continuing ASD Enrollees Identified with Specific
Special Education Needs
Students Whose First Kindergarten Year Was 1989-90

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Hard of Hearing | 1 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| | 2 | 1 | <1% | 2 | <1% | 0 | 0% | 3 | <1% |
| | 3 | 1 | <1% | 5 | <1% | 1 | 1% | 7 | <1% |
| | 4 | 1 | <1% | 5 | <1% | 0 | 0% | 6 | <1% |
| | 5 | 2 | 1% | 5 | <1% | 0 | 0% | 7 | <1% |
| | 6 | 1 | <1% | 6 | <1% | 0 | 0% | 7 | <1% |
| | 7 | 0 | 0% | 6 | <1% | 0 | 0% | 6 | <1% |
| | 8 | 0 | 0% | 5 | <1% | 0 | 0% | 5 | <1% |
| Deaf | 1 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 2 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 3 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 4 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 5 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 6 | 0 | 0% | 3 | <1% | 0 | 0% | 3 | <1% |
| | 7 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| | 8 | 0 | 0% | 1 | <1% | 0 | 0% | 1 | <1% |
| Deaf/Blind | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Multihandicapped | 1 | 1 | <1% | 2 | <1% | 1 | 1% | 4 | <1% |
| | 2 | 3 | 1% | 2 | <1% | 1 | 1% | 6 | <1% |
| | 3 | 1 | <1% | 1 | <1% | 1 | 1% | 3 | <1% |
| | 4 | 1 | <1% | 1 | <1% | 1 | 1% | 3 | <1% |
| | 5 | 1 | <1% | 1 | <1% | 1 | 1% | 3 | <1% |
| | 6 | 1 | <1% | 2 | <1% | 0 | 0% | 3 | <1% |
| | 7 | 1 | <1% | 1 | <1% | 0 | 0% | 2 | <1% |
| | 8 | 1 | <1% | 0 | 0% | 0 | 0% | 1 | <1% |

Table D-3 (Continued)

Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
Students Whose First Kindergarten Year Was 1989-90

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| Developmental Delay | 1 | 1 | <1% | 3 | <1% | 0 | 0% | 4 | <1% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 4 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 5 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 6 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 7 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 8 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Traumatic Brain Injury | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 1 | <1% | 0 | 0% | 0 | 0% | 1 | <1% |
| | 4 | 1 | <1% | 0 | 0% | 0 | 0% | 1 | <1% |
| | 5 | 1 | <1% | 0 | 0% | 0 | 0% | 1 | <1% |
| | 6 | 1 | <1% | 0 | 0% | 0 | 0% | 1 | <1% |
| | 7 | 1 | <1% | 0 | 0% | 0 | 0% | 1 | <1% |
| | 8 | 1 | <1% | 0 | 0% | 0 | 0% | 1 | <1% |
| Autism | 1 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 2 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | 3 | 0 | 0% | 0 | 0% | 1 | 1% | 1 | <1% |
| | 4 | 0 | 0% | 0 | 0% | 1 | 1% | 1 | <1% |
| | 5 | 0 | 0% | 0 | 0% | 1 | 1% | 1 | <1% |
| | 6 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| | 7 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| | 8 | 0 | 0% | 1 | <1% | 1 | 1% | 2 | <1% |
| Gifted | 1 | 0 | 0% | 19 | 1% | 0 | 0% | 19 | 1% |
| | 2 | 8 | 2% | 55 | 2% | 0 | 0% | 63 | 2% |
| | 3 | 9 | 2% | 100 | 4% | 1 | 1% | 110 | 4% |
| | 4 | 24 | 6% | 181 | 9% | 3 | 3% | 208 | 8% |
| | 5 | 26 | 7% | 205 | 10% | 4 | 4% | 235 | 10% |
| | 6 | 30 | 8% | 199 | 11% | 3 | 4% | 232 | 10% |
| | 7 | 22 | 7% | 207 | 12% | 4 | 5% | 233 | 11% |
| | 8 | 20 | 6% | 197 | 12% | 1 | 1% | 218 | 11% |

## Table D-3 (Continued)

### Number and Percent of Continuing ASD Enrollees Identified with Specific Special Education Needs
### Students Whose First Kindergarten Year Was 1989-90

| | Years After | FKD Schools | | HDK Schools | | Both Types | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| Exceptionality | First "K" | Num. | Per. | Num. | Per. | Num. | Per. | Num. | Per. |
| No Exceptionality | 1 | 436 | 84% | 2,319 | 86% | 94 | 83% | 2,849 | 86% |
| | 2 | 381 | 80% | 1,985 | 80% | 82 | 77% | 2,448 | 80% |
| | 3 | 320 | 75% | 1,736 | 76% | 69 | 72% | 2,125 | 76% |
| | 4 | 284 | 72% | 1,528 | 73% | 62 | 68% | 1,874 | 72% |
| | 5 | 277 | 73% | 1,450 | 73% | 55 | 62% | 1,782 | 73% |
| | 6 | 263 | 74% | 1,395 | 74% | 51 | 61% | 1,709 | 74% |
| | 7 | 257 | 76% | 1,320 | 74% | 48 | 60% | 1,625 | 74% |
| | 8 | 235 | 76% | 1,251 | 75% | 51 | 69% | 1,537 | 75% |

## Appendix E

## Mid-Level and High School Credit Information Through 1997-98 for Kindergarten Cohorts from 1987-88, 1988-89, and 1989-90

Table E-1

Middle Level and High School Credit and Grade Point Information
Students Who First Enrolled in "K" in 1987-88 in Schools Which Became FDK in 1988-89

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.03 | 5.06 | 84% | 2.33 | 7.39 | 248 |
| Eighth Grade | 6.08 | 5.30 | 87% | 2.36 | 5.09 | 219 |
| Ninth Grade | 5.36 | 4.69 | 88% | 2.20 | 5.27 | 204 |
| Tenth Grade | 5.42 | 4.82 | 89% | 2.28 | 5.53 | 139 |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

Table E-2

Middle Level and High School Credit and Grade Point Information
Students Who First Enrolled in "K" in 1987-88 in Schools Which Remained HDK in 1988-89

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.13 | 5.62 | 92% | 2.74 | 5.57 | 1,628 |
| Eighth Grade | 6.30 | 5.76 | 91% | 2.70 | 4.80 | 1,548 |
| Ninth Grade | 5.61 | 5.19 | 93% | 2.62 | 4.41 | 1,475 |
| Tenth Grade | 5.66 | 5.18 | 92% | 2.58 | 5.20 | 1,155 |
| Eleventh Grade | 5.80 | 5.35 | 92% | 2.93 | 3.30 | 5 |

Table E-3

Middle Level and High School Credit and Grade Point Information
Students Who First Enrolled in "K" in 1987-88 and Attended Both Types of Schools

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 5.77 | 4.67 | 81% | 2.13 | 6.09 | 73 |
| Eighth Grade | 6.15 | 5.13 | 83% | 2.06 | 6.09 | 59 |
| Ninth Grade | 5.02 | 4.27 | 85% | 2.04 | 6.46 | 54 |
| Tenth Grade | 5.20 | 4.04 | 78% | 1.72 | 7.67 | 33 |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

Table E-4

Middle Level and High School Credit and Grade Point Information
All Continuing Students Who First Enrolled in "K" in 1987-88

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.10 | 5.51 | 90% | 2.67 | 5.82 | 1,949 |
| Eighth Grade | 6.27 | 5.68 | 91% | 2.64 | 4.88 | 1,826 |
| Ninth Grade | 5.57 | 5.10 | 92% | 2.55 | 4.58 | 1,733 |
| Tenth Grade | 5.62 | 5.12 | 91% | 2.53 | 5.30 | 1,327 |
| Eleventh Grade | 5.80 | 5.35 | 92% | 2.93 | 3.30 | 5 |

### Table E-5

### Middle Level and High School Credit and Grade Point Information
### Students Who First Enrolled in "K" in 1988-89 in Schools With FDK

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.25 | 5.30 | 85% | 2.49 | 4.50 | 268 |
| Eighth Grade | 6.47 | 5.76 | 89% | 2.58 | 5.38 | 244 |
| Ninth Grade | 5.49 | 4.89 | 89% | 2.37 | 5.32 | 184 |
| Tenth Grade | -- | -- | -- | -- | -- | -- |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

### Table E-6

### Middle Level and High School Credit and Grade Point Information
### Students Who First Enrolled in "K" in 1988-89 in Schools With HDK

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.36 | 5.88 | 92% | 2.80 | 4.30 | 1,447 |
| Eighth Grade | 6.67 | 6.13 | 92% | 2.78 | 5.44 | 1,368 |
| Ninth Grade | 5.72 | 5.38 | 94% | 2.75 | 4.68 | 1,143 |
| Tenth Grade | 3.75 | 3.46 | 92% | 2.85 | 6.09 | 6 |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

### Table E-7

### Middle Level and High School Credit and Grade Point Information
### Students Who First Enrolled in "K" in 1988-89 and Attended Both Types of Schools

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.20 | 5.37 | 87% | 2.27 | 5.31 | 66 |
| Eighth Grade | 6.52 | 5.31 | 81% | 2.16 | 8.63 | 60 |
| Ninth Grade | 5.14 | 4.04 | 79% | 1.80 | 8.10 | 35 |
| Tenth Grade | -- | -- | -- | -- | - | -- |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

### Table E-8

### Middle Level and High School Credit and Grade Point Information
### All Continuing Students Who First Enrolled in "K" in 1988-89

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.34 | 5.77 | 91% | 2.74 | 4.37 | 1,781 |
| Eighth Grade | 6.63 | 6.05 | 91% | 2.73 | 5.55 | 1,672 |
| Ninth Grade | 5.67 | 5.28 | 93% | 2.68 | 4.85 | 1,362 |
| Tenth Grade | 3.75 | 3.46 | 92% | 2.85 | 6.09 | 6 |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

## Table E-9

### Middle Level and High School Credit and Grade Point Information
### Students Who First Enrolled in "K" in 1989-90 in Schools With FDK

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.68 | 5.72 | 86% | 2.45 | 5.72 | 311 |
| Eighth Grade | 6.71 | 6.06 | 90% | 2.65 | 5.91 | 223 |
| Ninth Grade | 6.00 | 6.00 | 100% | 3.06 | 3.97 | 3 |
| Tenth Grade | 6.00 | 6.00 | 100% | 2.42 | 0.08 | 1 |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

## Table E-10

### Middle Level and High School Credit and Grade Point Information
### Students Who First Enrolled in "K" in 1989-90 in Schools With HDK

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.72 | 6.14 | 91% | 2.76 | 4.82 | 1,657 |
| Eighth Grade | 6.75 | 6.32 | 94% | 2.86 | 5.63 | 1,334 |
| Ninth Grade | 5.90 | 5.88 | 100% | 3.45 | 1.24 | 13 |
| Tenth Grade | -- | -- | -- | -- | -- | -- |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

## Table E-11

### Middle Level and High School Credit and Grade Point Information
### Students Who First Enrolled in "K" in 1989-90 and Attended Both Types of Schools

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.60 | 5.60 | 85% | 2.40 | 6.03 | 70 |
| Eighth Grade | 6.63 | 5.83 | 89% | 2.44 | 6.02 | 48 |
| Ninth Grade | -- | -- | -- | -- | -- | -- |
| Tenth Grade | -- | -- | -- | -- | -- | -- |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

## Table E-12

### Middle Level and High School Credit and Grade Point Information
### All Continuing Students Who First Enrolled in "K" in 1989-90

| Grade Level | Credits Attempted | Credits Earned | % of Credits Earned | Grade Point Average | Absences per Credit | Number of Students |
|---|---|---|---|---|---|---|
| Seventh Grade | 6.71 | 6.06 | 90% | 2.70 | 5.00 | 2,038 |
| Eighth Grade | 6.74 | 6.27 | 93% | 2.82 | 5.68 | 1,605 |
| Ninth Grade | 5.92 | 5.91 | 100% | 3.38 | 1.76 | 16 |
| Tenth Grade | 6.00 | 6.00 | 100% | 2.42 | 0.08 | 1 |
| Eleventh Grade | -- | -- | -- | -- | -- | -- |

## Appendix F

## Norm Referenced Test Information Through 1997-98 for Kindergarten Cohorts from 1987-88, 1988-89, and 1989-90

Table F-1

Students Whose First "K" Enrollment was 1987-88
Fall 1990 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . . 3* |  | 4 |  | 5 |  | 6 |  | All |  | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT |  |
| FDK Schools |  |  |  |  |  |  |  |  |  |  |  |
| Reading Cmp | 49 | 143 | -- | -- | -- | -- | -- | -- | 49 | 143 | 100% |
| Total LA | 45 | 80 | -- | -- | -- | -- | -- | -- | 45 | 80 | 100% |
| Total Math | 50 | 143 | -- | -- | -- | -- | -- | -- | 50 | 143 | 100% |
| HDK Schools |  |  |  |  |  |  |  |  |  |  |  |
| Reading Cmp | 50 | 128 | 63 | 3 | -- | -- | -- | -- | 51 | 131 | 98% |
| Total LA | 45 | 99 | 48 | 3 | -- | -- | -- | -- | 45 | 102 | 97% |
| Total Math | 50 | 126 | 74 | 3 | -- | -- | -- | -- | 51 | 129 | 98% |
| Both Types |  |  |  |  |  |  |  |  |  |  |  |
| Reading Cmp | 38 | 19 | -- | -- | -- | -- | -- | -- | 38 | 19 | 100% |
| Total LA | 42 | 9 | -- | -- | -- | -- | -- | -- | 42 | 9 | 100% |
| Total Math | 43 | 20 | -- | -- | -- | -- | -- | -- | 43 | 20 | 100% |
| All Students |  |  |  |  |  |  |  |  |  |  |  |
| Reading Cmp | 49 | 290 | 63 | 3 | -- | -- | -- | -- | 49 | 293 | 99% |
| Total LA | 45 | 188 | 48 | 3 | -- | -- | -- | -- | 45 | 191 | 98% |
| Total Math | 50 | 289 | 74 | 3 | -- | -- | -- | -- | 50 | 292 | 99% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

Table F-2

Students Whose First "K" Enrollment was 1987-88
Spring 1992 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . . 3 |  | 4* |  | 5 |  | 6 |  | All |  | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT |  |
| FDK Schools |  |  |  |  |  |  |  |  |  |  |  |
| Reading Cmp | 25 | 47 | 47 | 198 | -- | -- | -- | -- | 48 | 245 | 81% |
| Total LA | 35 | 22 | 42 | 191 | -- | -- | -- | -- | 41 | 213 | 90% |
| Total Math | 32 | 44 | 53 | 200 | -- | -- | -- | -- | 50 | 244 | 82% |
| HDK Schools |  |  |  |  |  |  |  |  |  |  |  |
| Reading Cmp | 37 | 131 | 58 | 1,521 | 60 | 1 | -- | -- | 56 | 1,653 | 92% |
| Total LA | 42 | 87 | 54 | 1,455 | 56 | 2 | -- | -- | 53 | 1,544 | 94% |
| Total Math | 45 | 130 | 64 | 1,507 | 85 | 1 | -- | -- | 62 | 1,638 | 92% |
| Both Types |  |  |  |  |  |  |  |  |  |  |  |
| Reading Cmp | 29 | 11 | 38 | 56 | -- | -- | -- | -- | 36 | 67 | 84% |
| Total LA | 40 | 4 | 30 | 52 | -- | -- | -- | -- | 31 | 56 | 93% |
| Total Math | 25 | 13 | 39 | 55 | -- | -- | -- | -- | 36 | 68 | 81% |
| All Students |  |  |  |  |  |  |  |  |  |  |  |
| Reading Cmp | 33 | 189 | 56 | 1,775 | 60 | 1 | -- | -- | 54 | 1,965 | 90% |
| Total LA | 41 | 113 | 52 | 1,698 | 56 | 2 | -- | -- | 51 | 1,813 | 94% |
| Total Math | 41 | 187 | 62 | 1,762 | 85 | 1 | -- | -- | 60 | 1,950 | 90% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-3

### Students Whose First "K" Enrollment was 1987-88
### Spring 1993 Iowa Tests of Basic Skills Scores
### Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT) by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type | Grade Levels . . . | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | | 4 | | 5* | | 6 | | All | | |
| Test Area | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | -- | -- | 31 | 53 | 53 | 152 | -- | -- | 48 | 205 | 74% |
| Total LA | -- | -- | 31 | 52 | 59 | 100 | -- | -- | 49 | 152 | 66% |
| Total Math | -- | -- | 36 | 54 | 56 | 126 | -- | -- | 50 | 180 | 70% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | 53 | 1 | 38 | 328 | 65 | 636 | 62 | 4 | 56 | 969 | 66% |
| Total LA | 41 | 1 | 35 | 323 | 64 | 512 | 62 | 4 | 53 | 840 | 61% |
| Total Math | 51 | 1 | 45 | 327 | 66 | 672 | 76 | 4 | 59 | 1,004 | 67% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | -- | – | 26 | 24 | 40 | 31 | -- | -- | 34 | 55 | 56% |
| Total LA | -- | – | 23 | 24 | 50 | 18 | -- | -- | 33 | 42 | 43% |
| Total Math | -- | – | 28 | 24 | 47 | 26 | -- | -- | 38 | 50 | 52% |
| All Students | | | | | | | | | | | |
| Reading Cmp | 53 | 1 | 36 | 405 | 62 | 819 | 62 | 4 | 53 | 1,229 | 67% |
| Total LA | 41 | 1 | 33 | 399 | 63 | 630 | 62 | 4 | 51 | 1,034 | 61% |
| Total Math | 51 | 1 | 43 | 405 | 64 | 824 | 76 | 4 | 57 | 1,234 | 67% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-4

### Students Whose First "K" Enrollment was 1987-88
### Spring 1994 Iowa Tests of Basic Skills Scores
### Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT) by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type | Grade Levels . . . | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 | | 5 | | 6* | | 7 | | All | | |
| Test Area | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | 9 | 2 | 36 | 53 | 50 | 179 | -- | -- | 46 | 234 | 76% |
| Total LA | 5 | 2 | 43 | 19 | 51 | 176 | -- | -- | 49 | 197 | 89% |
| Total Math | 15 | 2 | 37 | 20 | 59 | 175 | -- | -- | 56 | 197 | 89% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | 37 | 4 | 43 | 306 | 66 | 1,368 | 74 | 3 | 62 | 1,681 | 81% |
| Total LA | 32 | 4 | 44 | 130 | 63 | 1,368 | 54 | 3 | 61 | 1,505 | 91% |
| Total Math | 25 | 4 | 43 | 170 | 69 | 1,372 | 74 | 3 | 66 | 1,549 | 89% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | -- | – | 42 | 22 | 43 | 48 | -- | -- | 43 | 70 | 69% |
| Total LA | -- | – | 20 | 5 | 45 | 48 | -- | -- | 42 | 53 | 91% |
| Total Math | -- | -- | 14 | 9 | 45 | 49 | -- | -- | 40 | 58 | 84% |
| All Students | | | | | | | | | | | |
| Reading Cmp | 25 | 6 | 42 | 381 | 63 | 1,595 | 74 | 3 | 59 | 1,985 | 80% |
| Total LA | 19 | 6 | 43 | 154 | 61 | 1,592 | 54 | 3 | 60 | 1,755 | 91% |
| Total Math | 22 | 6 | 41 | 199 | 67 | 1,596 | 74 | 3 | 64 | 1,804 | 88% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-5

Students Whose First "K" Enrollment was 1987-88
Spring 1995 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type | Grade Levels . . . | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | | 6 | | 7* | | 8 | | All | | |
| Test Area | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | 18 | 1 | 36 | 49 | 58 | 157 | -- | -- | 52 | 207 | 76% |
| Total LA | -- | -- | 36 | 48 | 58 | 148 | -- | -- | 53 | 196 | 76% |
| Total Math | -- | -- | 38 | 48 | 59 | 149 | -- | -- | 54 | 197 | 76% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | 50 | 5 | 41 | 286 | 65 | 1,243 | 51 | 3 | 60 | 1,537 | 81% |
| Total LA | 59 | 1 | 39 | 282 | 64 | 1,195 | 67 | 3 | 59 | 1,481 | 81% |
| Total Math | 42 | 2 | 44 | 286 | 67 | 1,210 | 70 | 3 | 63 | 1,501 | 81% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | -- | -- | 32 | 23 | 42 | 41 | -- | -- | 39 | 64 | 64% |
| Total LA | -- | -- | 23 | 23 | 44 | 40 | -- | -- | 36 | 63 | 63% |
| Total Math | -- | -- | 31 | 22 | 40 | 39 | -- | -- | 37 | 61 | 64% |
| All Students | | | | | | | | | | | |
| Reading Cmp | 44 | 6 | 40 | 358 | 63 | 1,441 | 51 | 3 | 59 | 1,808 | 80% |
| Total LA | 59 | 1 | 38 | 353 | 63 | 1,383 | 67 | 3 | 58 | 1,740 | 79% |
| Total Math | 42 | 2 | 42 | 356 | 66 | 1,398 | 70 | 3 | 61 | 1,759 | 79% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-6

Students Whose First "K" Enrollment was 1987-88
Spring 1996 California Achievement Tests Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type | Grade Levels . . . | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | | 7 | | 8* | | 9 | | All | | |
| Test Area | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Total Reading | 52 | 3 | 40 | 50 | 61 | 145 | -- | -- | 56 | 198 | 73% |
| Total LA | 42 | 3 | 37 | 50 | 57 | 146 | -- | -- | 51 | 199 | 73% |
| Total Math | 37 | 3 | 41 | 48 | 63 | 145 | -- | -- | 58 | 196 | 74% |
| HDK Schools | | | | | | | | | | | |
| Total Reading | 79 | 3 | 48 | 268 | 71 | 1,189 | 77 | 5 | 67 | 1,465 | 81% |
| Total LA | 65 | 3 | 37 | 271 | 63 | 1,184 | 66 | 6 | 58 | 1,464 | 81% |
| Total Math | 86 | 3 | 48 | 269 | 70 | 1,182 | 77 | 6 | 66 | 1,460 | 81% |
| Both Types | | | | | | | | | | | |
| Total Reading | -- | -- | 33 | 19 | 48 | 36 | -- | -- | 43 | 55 | 65% |
| Total LA | -- | -- | 25 | 19 | 38 | 37 | -- | -- | 33 | 56 | 66% |
| Total Math | -- | -- | 44 | 17 | 47 | 37 | -- | -- | 46 | 54 | 69% |
| All Students | | | | | | | | | | | |
| Total Reading | 67 | 6 | 46 | 337 | 69 | 1,370 | 77 | 5 | 65 | 1,718 | 80% |
| Total LA | 53 | 6 | 36 | 340 | 61 | 1,367 | 66 | 6 | 57 | 1,719 | 80% |
| Total Math | 64 | 6 | 47 | 334 | 68 | 1,368 | 77 | 6 | 64 | 1,710 | 80% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-7

### Students Whose First "K" Enrollment was 1987-88
### Spring 1997 California Achievement Tests Scores
### Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT) by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type | Grade Levels . . . | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | | 8 | | 9 * | | 10 | | All | | |
| Test Area | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Total Reading | 42 | 4 | 29 | 37 | 54 | 136 | -- | -- | 49 | 177 | 77% |
| Total LA | 20 | 5 | 35 | 37 | 56 | 136 | -- | -- | 50 | 178 | 76% |
| Total Math | 49 | 4 | 39 | 38 | 66 | 137 | -- | -- | 60 | 179 | 77% |
| HDK Schools | | | | | | | | | | | |
| Total Reading | 56 | 10 | 45 | 243 | 70 | 1,122 | 87 | 5 | 66 | 1,380 | 81% |
| Total LA | 32 | 11 | 39 | 246 | 66 | 1,125 | 77 | 5 | 61 | 1,387 | 81% |
| Total Math | 44 | 11 | 49 | 245 | 75 | 1,129 | 86 | 5 | 71 | 1,390 | 81% |
| Both Types | | | | | | | | | | | |
| Total Reading | 2 | 1 | 39 | 15 | 42 | 34 | -- | -- | 40 | 50 | 68% |
| Total LA | 24 | 1 | 25 | 15 | 42 | 34 | -- | -- | 36 | 50 | 68% |
| Total Math | 14 | 1 | 34 | 15 | 55 | 32 | -- | -- | 48 | 48 | 67% |
| All Students | | | | | | | | | | | |
| Total Reading | 47 | 15 | 42 | 295 | 68 | 1,292 | 87 | 5 | 63 | 1,607 | 80% |
| Total LA | 27 | 17 | 38 | 298 | 65 | 1,295 | 77 | 5 | 60 | 1,615 | 80% |
| Total Math | 43 | 16 | 47 | 298 | 74 | 1,298 | 86 | 5 | 69 | 1,617 | 80% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-8

### Students Whose First "K" Enrollment was 1987-88
### Spring 1998 California Achievement Tests Scores
### Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT) by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type | Grade Levels . . . | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 8 | | 9 | | 10 * | | 11 | | All | | |
| Test Area | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Total Reading | 17 | 2 | 30 | 45 | 55 | 122 | -- | -- | 47 | 169 | 72% |
| Total LA | 19 | 2 | 29 | 45 | 55 | 123 | -- | -- | 48 | 170 | 72% |
| Total Math | 25 | 2 | 47 | 45 | 68 | 125 | -- | -- | 62 | 172 | 73% |
| HDK Schools | | | | | | | | | | | |
| Total Reading | 60 | 9 | 44 | 239 | 73 | 1,038 | 66 | 7 | 68 | 1,293 | 80% |
| Total LA | 52 | 8 | 41 | 239 | 67 | 1,035 | 73 | 6 | 62 | 1,288 | 80% |
| Total Math | 41 | 9 | 52 | 239 | 75 | 1,046 | 71 | 7 | 71 | 1,301 | 80% |
| Both Types | | | | | | | | | | | |
| Total Reading | 20 | 1 | 33 | 12 | 50 | 30 | -- | -- | 44 | 43 | 70% |
| Total LA | 15 | 1 | 48 | 11 | 39 | 29 | -- | -- | 40 | 41 | 71% |
| Total Math | 2 | 1 | 41 | 11 | 50 | 30 | -- | -- | 46 | 42 | 71% |
| All Students | | | | | | | | | | | |
| Total Reading | 49 | 12 | 41 | 296 | 71 | 1,190 | 66 | 7 | 65 | 1,505 | 79% |
| Total LA | 41 | 11 | 39 | 295 | 65 | 1,187 | 73 | 6 | 60 | 1,499 | 79% |
| Total Math | 33 | 12 | 51 | 295 | 74 | 1,201 | 71 | 7 | 69 | 1,515 | 79% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-9

### Students Whose First "K" Enrollment was 1988-89
Spring 1992 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . .<br>3* | | 4 | | 5 | | 6 | | All | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | 49 | 183 | -- | -- | -- | -- | -- | -- | 49 | 183 | 100% |
| Total LA | 67 | 96 | -- | -- | -- | -- | -- | -- | 67 | 96 | 100% |
| Total Math | 53 | 178 | -- | -- | -- | -- | -- | -- | 53 | 178 | 100% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | 61 | 484 | 33 | 2 | -- | -- | -- | -- | 60 | 486 | 100% |
| Total LA | 67 | 376 | 42 | 2 | -- | -- | -- | -- | 67 | 378 | 99% |
| Total Math | 66 | 455 | 64 | 2 | -- | -- | -- | -- | 66 | 457 | 100% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | 37 | 34 | 14 | 1 | -- | -- | -- | -- | 37 | 35 | 97% |
| Total LA | 46 | 14 | 25 | 1 | -- | -- | -- | -- | 45 | 15 | 93% |
| Total Math | 53 | 32 | 8 | 1 | -- | -- | -- | -- | 52 | 33 | 97% |
| All Students | | | | | | | | | | | |
| Reading Cmp | 56 | 701 | 25 | 3 | -- | -- | -- | -- | 56 | 704 | 100% |
| Total LA | 67 | 486 | 36 | 3 | -- | -- | -- | -- | 67 | 489 | 99% |
| Total Math | 61 | 665 | 41 | 3 | -- | -- | -- | -- | 61 | 668 | 100% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-10

### Students Whose First "K" Enrollment was 1988-89
Spring 1993 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . .<br>3 | | 4* | | 5 | | 6 | | All | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | 25 | 36 | 48 | 241 | -- | -- | -- | -- | 45 | 277 | 87% |
| Total LA | 33 | 15 | 45 | 240 | -- | -- | -- | -- | 44 | 255 | 94% |
| Total Math | 49 | 17 | 54 | 244 | -- | -- | -- | -- | 53 | 261 | 93% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | 40 | 85 | 60 | 1,422 | 28 | 1 | -- | -- | 59 | 1,508 | 94% |
| Total LA | 49 | 57 | 59 | 1,417 | -- | -- | -- | -- | 59 | 1,474 | 96% |
| Total Math | 39 | 75 | 67 | 1,411 | -- | -- | -- | -- | 65 | 1,487 | 95% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | 11 | 15 | 36 | 51 | -- | -- | -- | -- | 29 | 66 | 77% |
| Total LA | 11 | 9 | 35 | 49 | -- | -- | -- | -- | 30 | 58 | 84% |
| Total Math | 20 | 11 | 41 | 50 | -- | -- | -- | -- | 37 | 61 | 82% |
| All Students | | | | | | | | | | | |
| Reading Cmp | 32 | 136 | 58 | 1,714 | 28 | 1 | -- | -- | 56 | 1,851 | 93% |
| Total LA | 41 | 81 | 56 | 1,706 | -- | -- | -- | -- | 56 | 1,787 | 95% |
| Total Math | 39 | 104 | 64 | 1,705 | -- | -- | -- | -- | 63 | 1,809 | 94% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-11

Students Whose First "K" Enrollment was 1988-89
Spring 1994 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . . 3 | | 4 | | 5* | | 6 | | All | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | -- | -- | 25 | 49 | 54 | 219 | -- | -- | 49 | 268 | 82% |
| Total LA | -- | -- | 28 | 49 | 65 | 99 | -- | -- | 52 | 148 | 67% |
| Total Math | -- | -- | 34 | 51 | 61 | 123 | -- | -- | 53 | 174 | 71% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | -- | -- | 37 | 201 | 65 | 1,338 | 41 | 2 | 62 | 1,541 | 87% |
| Total LA | -- | -- | 37 | 193 | 69 | 596 | 41 | 2 | 61 | 791 | 75% |
| Total Math | -- | -- | 45 | 199 | 66 | 729 | 78 | 2 | 62 | 930 | 78% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | -- | -- | 21 | 19 | 46 | 43 | 33 | 1 | 38 | 63 | 68% |
| Total LA | -- | -- | 17 | 14 | 43 | 15 | 44 | 1 | 30 | 30 | 50% |
| Total Math | -- | -- | 28 | 18 | 30 | 27 | 27 | 1 | 29 | 46 | 59% |
| All Students | | | | | | | | | | | |
| Reading Cmp | -- | -- | 34 | 269 | 63 | 1,600 | 38 | 3 | 59 | 1,872 | 85% |
| Total LA | -- | -- | 33 | 256 | 68 | 710 | 42 | 3 | 59 | 969 | 73% |
| Total Math | -- | -- | 42 | 268 | 65 | 879 | 62 | 3 | 59 | 1,150 | 76% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-12

Students Whose First "K" Enrollment was 1988-89
Spring 1995 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . . 4 | | 5 | | 6* | | 7 | | All | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | -- | -- | 28 | 47 | 54 | 203 | -- | -- | 49 | 250 | 81% |
| Total LA | -- | -- | 26 | 9 | 56 | 196 | -- | -- | 55 | 205 | 96% |
| Total Math | -- | -- | 30 | 16 | 59 | 203 | -- | -- | 56 | 219 | 93% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | -- | -- | 47 | 200 | 65 | 1,293 | 49 | 2 | 63 | 1,495 | 86% |
| Total LA | -- | -- | 40 | 28 | 65 | 1,273 | 39 | 2 | 65 | 1,303 | 98% |
| Total Math | -- | -- | 49 | 75 | 71 | 1,296 | 57 | 2 | 70 | 1,373 | 94% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | -- | -- | 29 | 17 | 44 | 45 | -- | -- | 39 | 62 | 73% |
| Total LA | -- | -- | 4 | 1 | 47 | 43 | -- | -- | 45 | 44 | 98% |
| Total Math | -- | -- | 25 | 4 | 47 | 45 | -- | -- | 45 | 49 | 92% |
| All Students | | | | | | | | | | | |
| Reading Cmp | -- | -- | 42 | 264 | 63 | 1,541 | 49 | 2 | 60 | 1,807 | 85% |
| Total LA | -- | -- | 35 | 38 | 64 | 1,512 | 39 | 2 | 63 | 1,552 | 97% |
| Total Math | -- | -- | 45 | 95 | 69 | 1,544 | 57 | 2 | 67 | 1,641 | 94% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-13

Students Whose First "K" Enrollment was 1988-89
Spring 1996 California Achievement Tests Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . .<br>5 | | 6 | | 7 * | | 8 | | All | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Total Reading | -- | -- | 32 | 48 | 61 | 186 | -- | -- | 55 | 234 | 79% |
| Total LA | -- | -- | 32 | 48 | 55 | 188 | -- | -- | 51 | 236 | 80% |
| Total Math | -- | -- | 38 | 48 | 62 | 186 | -- | -- | 57 | 234 | 79% |
| HDK Schools | | | | | | | | | | | |
| Total Reading | 10 | 2 | 48 | 185 | 73 | 1,185 | 55 | 2 | 69 | 1,374 | 86% |
| Total LA | 39 | 2 | 42 | 186 | 67 | 1,185 | 41 | 2 | 64 | 1,375 | 86% |
| Total Math | 52 | 2 | 52 | 187 | 73 | 1,181 | 77 | 2 | 70 | 1,372 | 86% |
| Both Types | | | | | | | | | | | |
| Total Reading | -- | -- | 28 | 17 | 49 | 36 | -- | -- | 42 | 53 | 68% |
| Total LA | -- | -- | 25 | 17 | 43 | 36 | -- | -- | 37 | 53 | 68% |
| Total Math | -- | -- | 42 | 17 | 50 | 34 | -- | -- | 48 | 51 | 67% |
| All Students | | | | | | | | | | | |
| Total Reading | 10 | 2 | 43 | 250 | 71 | 1,407 | 55 | 2 | 67 | 1,661 | 85% |
| Total LA | 39 | 2 | 39 | 251 | 65 | 1,409 | 41 | 2 | 61 | 1,664 | 85% |
| Total Math | 52 | 2 | 49 | 252 | 71 | 1,401 | 77 | 2 | 68 | 1,657 | 85% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-14

Students Whose First "K" Enrollment was 1988-89
Spring 1997 California Achievement Tests Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . .<br>6 | | 7 | | 8 * | | 9 | | All | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Total Reading | -- | -- | 38 | 49 | 62 | 162 | -- | -- | 56 | 211 | 77% |
| Total LA | -- | -- | 30 | 50 | 56 | 162 | -- | -- | 50 | 212 | 76% |
| Total Math | -- | -- | 41 | 49 | 61 | 158 | -- | -- | 56 | 207 | 76% |
| HDK Schools | | | | | | | | | | | |
| Total Reading | 20 | 1 | 49 | 186 | 71 | 1,080 | 78 | 5 | 68 | 1,272 | 85% |
| Total LA | 1 | 1 | 39 | 187 | 66 | 1,075 | 71 | 5 | 62 | 1,268 | 85% |
| Total Math | 25 | 1 | 52 | 189 | 73 | 1,083 | 86 | 5 | 70 | 1,278 | 85% |
| Both Types | | | | | | | | | | | |
| Total Reading | -- | -- | 38 | 18 | 41 | 33 | -- | -- | 40 | 51 | 65% |
| Total LA | -- | -- | 21 | 17 | 44 | 33 | -- | -- | 35 | 50 | 66% |
| Total Math | -- | -- | 41 | 19 | 47 | 32 | -- | -- | 45 | 51 | 63% |
| All Students | | | | | | | | | | | |
| Total Reading | 20 | 1 | 46 | 253 | 69 | 1,275 | 78 | 5 | 66 | 1,534 | 83% |
| Total LA | 1 | 1 | 36 | 254 | 64 | 1,270 | 71 | 5 | 60 | 1,530 | 83% |
| Total Math | 25 | 1 | 49 | 257 | 71 | 1,273 | 86 | 5 | 68 | 1,536 | 83% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-15

### Students Whose First "K" Enrollment was 1988-89
### Spring 1998 California Achievement Tests Scores
### Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT) by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type | Grade Levels . . . 7 | | 8 | | 9 * | | 10 | | All | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Area | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | |
| Total Reading | 25 | 2 | 32 | 48 | 61 | 167 | 99 | 1 | 55 | 218 | 77% |
| Total LA | 22 | 2 | 29 | 48 | 59 | 165 | 93 | 1 | 52 | 216 | 76% |
| Total Math | 33 | 2 | 44 | 47 | 65 | 167 | 99 | 1 | 61 | 217 | 77% |
| HDK Schools | | | | | | | | | | | |
| Total Reading | 38 | 6 | 48 | 176 | 68 | 1,059 | 92 | 3 | 66 | 1,244 | 85% |
| Total LA | 30 | 6 | 40 | 172 | 67 | 1,059 | 95 | 3 | 64 | 1,240 | 85% |
| Total Math | 38 | 6 | 47 | 177 | 77 | 1,062 | 94 | 3 | 73 | 1,248 | 85% |
| Both Types | | | | | | | | | | | |
| Total Reading | 67 | 1 | 30 | 15 | 34 | 30 | -- | -- | 33 | 46 | 65% |
| Total LA | 44 | 1 | 20 | 14 | 41 | 30 | -- | -- | 34 | 45 | 67% |
| Total Math | 41 | 1 | 33 | 15 | 46 | 30 | -- | -- | 42 | 46 | 65% |
| All Students | | | | | | | | | | | |
| Total Reading | 38 | 9 | 43 | 239 | 67 | 1,256 | 95 | 4 | 63 | 1,508 | 83% |
| Total LA | 30 | 9 | 36 | 234 | 66 | 1,254 | 94 | 4 | 61 | 1,501 | 84% |
| Total Math | 37 | 9 | 45 | 239 | 75 | 1,259 | 96 | 4 | 70 | 1,511 | 83% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

Table F-16

Students Whose First "K" Enrollment was 1988-89
Spring 1993 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . . 3* PR | 3* NT | 4 PR | 4 NT | 5 PR | 5 NT | 6 PR | 6 NT | All PR | All NT | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | 44 | 220 | 88 | 3 | 51 | 1 | -- | -- | 45 | 224 | 98% |
| Total LA | 63 | 118 | 73 | 3 | 20 | 1 | -- | -- | 63 | 122 | 97% |
| Total Math | 54 | 123 | 85 | 3 | 60 | 1 | -- | -- | 55 | 127 | 97% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | 59 | 606 | 77 | 6 | -- | -- | -- | -- | 59 | 612 | 99% |
| Total LA | 68 | 463 | 61 | 6 | -- | -- | -- | -- | 68 | 469 | 99% |
| Total Math | 61 | 576 | 78 | 6 | -- | -- | -- | -- | 61 | 582 | 99% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | 33 | 44 | -- | -- | -- | -- | -- | -- | 33 | 44 | 100% |
| Total LA | 53 | 24 | -- | -- | -- | -- | -- | -- | 53 | 24 | 100% |
| Total Math | 49 | 21 | -- | -- | -- | -- | -- | -- | 49 | 21 | 100% |
| All Students | | | | | | | | | | | |
| Reading Cmp | 54 | 870 | 81 | 9 | 51 | 1 | -- | -- | 54 | 880 | 99% |
| Total LA | 67 | 605 | 65 | 9 | 20 | 1 | -- | -- | 67 | 615 | 98% |
| Total Math | 60 | 720 | 80 | 9 | 60 | 1 | -- | -- | 60 | 730 | 99% |

* "Expected Grade" – The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

Table F-17

Students Whose First "K" Enrollment was 1988-89
Spring 1994 Iowa Tests of Basic Skills Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . . 3 PR | 3 NT | 4* PR | 4* NT | 5 PR | 5 NT | 6 PR | 6 NT | All PR | All NT | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FDK Schools | | | | | | | | | | | |
| Reading Cmp | 28 | 50 | 41 | 273 | 80 | 2 | 48 | 1 | 39 | 326 | 84% |
| Total LA | 37 | 9 | 40 | 267 | 94 | 1 | 22 | 1 | 40 | 278 | 96% |
| Total Math | 27 | 24 | 48 | 266 | 85 | 1 | 65 | 1 | 46 | 292 | 91% |
| HDK Schools | | | | | | | | | | | |
| Reading Cmp | 38 | 245 | 61 | 1,581 | 65 | 7 | -- | -- | 58 | 1,833 | 86% |
| Total LA | 40 | 91 | 60 | 1,546 | 56 | 5 | -- | -- | 59 | 1.642 | 94% |
| Total Math | 43 | 130 | 67 | 1,580 | 69 | 7 | -- | -- | 65 | 1,717 | 92% |
| Both Types | | | | | | | | | | | |
| Reading Cmp | 10 | 9 | 37 | 58 | -- | -- | -- | -- | 32 | 67 | 87% |
| Total LA | 20 | 2 | 39 | 54 | -- | -- | -- | -- | 38 | 56 | 96% |
| Total Math | 21 | 4 | 40 | 57 | -- | -- | -- | -- | 38 | 61 | 93% |
| All Students | | | | | | | | | | | |
| Reading Cmp | 35 | 304 | 57 | 1,912 | 69 | 9 | 48 | 1 | 54 | 2,226 | 86% |
| Total LA | 39 | 102 | 57 | 1,867 | 65 | 6 | 22 | 1 | 56 | 1,976 | 94% |
| Total Math | 39 | 158 | 63 | 1,903 | 71 | 8 | 65 | 1 | 62 | 2,070 | 92% |

* "Expected Grade" – The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-18

### Students Whose First "K" Enrollment was 1988-89
### Spring 1995 Iowa Tests of Basic Skills Scores
### Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT) by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type Test Area | Grade Levels . . . | | | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | | 4 | | 5 * | | 6 | | 7 | | All | | |
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | | | |
| Reading Cmp | -- | -- | 31 | 46 | 52 | 250 | 58 | 2 | 54 | 1 | 49 | 299 | 84% |
| Total LA | -- | -- | 27 | 42 | 65 | 86 | 73 | 2 | 28 | 1 | 52 | 131 | 66% |
| Total Math | -- | -- | 32 | 45 | 59 | 123 | 67 | 2 | 54 | 1 | 52 | 171 | 72% |
| HDK Schools | | | | | | | | | | | | | |
| Reading Cmp | 12 | 2 | 40 | 242 | 68 | 1,487 | 76 | 7 | -- | -- | 64 | 1,738 | 86% |
| Total LA | -- | -- | 37 | 237 | 72 | 305 | 67 | 7 | -- | -- | 57 | 549 | 56% |
| Total Math | 4 | 1 | 47 | 246 | 73 | 588 | 81 | 7 | -- | -- | 66 | 842 | 70% |
| Both Types | | | | | | | | | | | | | |
| Reading Cmp | 90 | 1 | 12 | 7 | 41 | 53 | -- | -- | -- | -- | 38 | 61 | 87% |
| Total LA | -- | -- | 22 | 7 | 66 | 15 | -- | -- | -- | -- | 51 | 22 | 68% |
| Total Math | 84 | 1 | 19 | 8 | 60 | 25 | -- | -- | -- | -- | 50 | 34 | 74% |
| All Students | | | | | | | | | | | | | |
| Reading Cmp | 36 | 3 | 37 | 295 | 65 | 1,790 | 73 | 9 | 54 | 1 | 61 | 2,098 | 85% |
| Total LA | -- | -- | 35 | 286 | 70 | 406 | 68 | 9 | 28 | 1 | 56 | 702 | 58% |
| Total Math | 36 | 2 | 44 | 299 | 71 | 736 | 78 | 9 | 54 | 1 | 63 | 1,047 | 70% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-19

### Students Whose First "K" Enrollment was 1988-89
### Spring 1996 California Achievement Tests Scores
### Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT) by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type Test Area | Grade Levels . . . | | | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 | | 5 | | 6 * | | 7 | | 8 | | All | | |
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | | | |
| Total Reading | -- | -- | 30 | 44 | 50 | 247 | 99 | 1 | 44 | 1 | 47 | 293 | 84% |
| Total LA | -- | -- | 28 | 46 | 51 | 245 | 99 | 1 | 25 | 1 | 47 | 293 | 84% |
| Total Math | -- | -- | 25 | 46 | 62 | 248 | 99 | 1 | 50 | 1 | 56 | 296 | 84% |
| HDK Schools | | | | | | | | | | | | | |
| Total Reading | 13 | 2 | 52 | 227 | 69 | 1,410 | 92 | 8 | -- | -- | 67 | 1,647 | 86% |
| Total LA | 19 | 2 | 51 | 226 | 72 | 1,408 | 82 | 8 | -- | -- | 69 | 1,644 | 86% |
| Total Math | 14 | 2 | 49 | 230 | 75 | 1,405 | 91 | 8 | -- | -- | 72 | 1,645 | 85% |
| Both Types | | | | | | | | | | | | | |
| Total Reading | -- | -- | 16 | 7 | 43 | 45 | -- | -- | -- | -- | 39 | 52 | 87% |
| Total LA | 4 | 1 | 20 | 7 | 47 | 45 | -- | -- | -- | -- | 42 | 53 | 85% |
| Total Math | -- | -- | 25 | 7 | 48 | 45 | -- | -- | -- | -- | 45 | 52 | 87% |
| All Students | | | | | | | | | | | | | |
| Total Reading | 13 | 2 | 47 | 278 | 66 | 1,702 | 93 | 9 | 44 | 1 | 63 | 1,992 | 85% |
| Total LA | 12 | 3 | 47 | 279 | 68 | 1,698 | 86 | 9 | 25 | 1 | 65 | 1,990 | 85% |
| Total Math | 14 | 2 | 44 | 283 | 72 | 1,698 | 93 | 9 | 50 | 1 | 69 | 1,993 | 85% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-20

Students Whose First "K" Enrollment was 1988-89
Spring 1997 California Achievement Tests Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . . | | | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | | 6 | | 7 * | | 8 | | 9 | | All | | |
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | | | |
| Total Reading | -- | -- | 28 | 47 | 59 | 224 | 94 | 2 | 54 | 1 | 54 | 274 | 82% |
| Total LA | -- | -- | 29 | 47 | 53 | 223 | 99 | 2 | 54 | 1 | 50 | 273 | 82% |
| Total Math | -- | -- | 31 | 46 | 63 | 227 | 98 | 2 | 41 | 1 | 58 | 276 | 82% |
| HDK Schools | | | | | | | | | | | | | |
| Total Reading | 16 | 3 | 48 | 219 | 72 | 1,336 | 91 | 9 | -- | -- | 69 | 1,567 | 85% |
| Total LA | 20 | 3 | 46 | 219 | 70 | 1,334 | 88 | 9 | -- | -- | 67 | 1,565 | 85% |
| Total Math | 11 | 3 | 56 | 220 | 74 | 1,338 | 90 | 9 | -- | -- | 72 | 1,570 | 85% |
| Both Types | | | | | | | | | | | | | |
| Total Reading | -- | -- | 20 | 8 | 52 | 43 | -- | -- | -- | -- | 47 | 51 | 84% |
| Total LA | -- | -- | 28 | 8 | 48 | 45 | -- | -- | -- | -- | 45 | 53 | 85% |
| Total Math | -- | -- | 21 | 8 | 54 | 47 | -- | -- | -- | -- | 49 | 55 | 85% |
| All Students | | | | | | | | | | | | | |
| Total Reading | 16 | 3 | 43 | 274 | 69 | 1,603 | 91 | 11 | 54 | 1 | 66 | 1,892 | 85% |
| Total LA | 20 | 3 | 43 | 274 | 67 | 1,602 | 91 | 11 | 54 | 1 | 64 | 1,891 | 85% |
| Total Math | 11 | 3 | 50 | 274 | 72 | 1,612 | 92 | 11 | 41 | 1 | 69 | 1,901 | 85% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

## Table F-21

Students Whose First "K" Enrollment was 1988-89
Spring 1998 California Achievement Tests Scores
Percentile Rank Scores (PR) Corresponding to Average NCEs and Number Tested (NT)
by School Type (based on 1988-89 Program) for Kindergarten Attendance

| School Type<br>Test Area | Grade Levels . . . | | | | | | | | | | | | Percent of Those Tested Who Were at "Expected" Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | | 7 | | 8 * | | 9 | | 10 | | All | | |
| | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | PR | NT | |
| FDK Schools | | | | | | | | | | | | | |
| Total Reading | 52 | 1 | 25 | 40 | 59 | 209 | 92 | 2 | 72 | 1 | 54 | 253 | 83% |
| Total LA | 65 | 1 | 27 | 41 | 54 | 208 | 97 | 2 | 41 | 1 | 50 | 253 | 82% |
| Total Math | 46 | 1 | 37 | 38 | 61 | 207 | 99 | 2 | 59 | 1 | 58 | 249 | 83% |
| HDK Schools | | | | | | | | | | | | | |
| Total Reading | 18 | 3 | 48 | 223 | 74 | 1,264 | 86 | 10 | -- | -- | 70 | 1,500 | 84% |
| Total LA | 27 | 3 | 42 | 219 | 68 | 1,262 | 86 | 10 | -- | -- | 64 | 1,494 | 84% |
| Total Math | 13 | 3 | 52 | 220 | 73 | 1,266 | 87 | 10 | -- | -- | 70 | 1,499 | 84% |
| Both Types | | | | | | | | | | | | | |
| Total Reading | 16 | 1 | 18 | 12 | 50 | 41 | -- | -- | -- | -- | 42 | 54 | 76% |
| Total LA | 22 | 1 | 24 | 12 | 50 | 40 | -- | -- | -- | -- | 43 | 53 | 75% |
| Total Math | 33 | 1 | 32 | 12 | 47 | 41 | -- | -- | -- | -- | 43 | 54 | 76% |
| All Students | | | | | | | | | | | | | |
| Total Reading | 23 | 5 | 43 | 275 | 71 | 1,514 | 87 | 12 | 72 | 1 | 67 | 1,807 | 84% |
| Total LA | 33 | 5 | 39 | 272 | 66 | 1,510 | 88 | 12 | 49 | 1 | 62 | 1,800 | 84% |
| Total Math | 22 | 5 | 49 | 270 | 71 | 1,514 | 91 | 12 | 59 | 1 | 68 | 1,802 | 84% |

* "Expected Grade" -- The Grade Level Corresponding to One Grade Level Movement per Year of Enrollment

# Appendix G

## Review of National Research on Half-Day Versus Full-Day Kindergarten

Compiled by Steve Garrison
January 1998

# Review of Research: Half Versus Full-Day Kindergarten

Department of Assessment & Evaluation
Jan., 1998
Steve Garrison

## Introduction

As with other instructional programs, the effectiveness of kindergarten is studied cyclically. For example, the NEA studied kindergarten in 1925, 1961, and 1967. Kindergarten underwent a period of scrutiny in the 1970's and 1980's as a national movement to convert from half to full day kindergarten gained momentum. Much of the literature about value of full day kindergarten compared with half-day kindergarten comes from this period.

In 1986 most of the nation's teachers still taught half-day kindergarten, according to a report by *ERS Spectrum* (1986); that is, 49% of kindergarten teachers taught two half-day sessions. As found in this same report, 28% of teachers taught full-day, every day kindergarten. In Europe, kindergarten is still a full-day affair (Humphrey, 1981) and in the early days of kindergarten in the United States it was taught on a full-day basis. The how, when, and why of abandoning full-day kindergarten in favor of half-day programs isn't obvious from the literature but a conversion was made to (mostly) half-day kindergarten in America. In the 70's and 80's with more mothers leaving home to join the workforce, and with a parallel increase in early preparation programs (Head Start, "academic" daycare) a renewed increase in full-day kindergarten is seen.

What are the important questions regarding adoption of full day kindergarten? This report intends to answer the questions below:

- Are there gains when comparing full versus one-half day kindergarten?
- In what areas do we find these gains?
- Do the gains endure over a student's career?

Keep these questions in mind as you read summaries of articles below. The first group of articles are mostly primary research reports which compare full vs. half-day kindergarten. The second group of article reviews focusing on papers that summarize or review the field.

It should be noted that certain researchers (e.g. Puleo, 1986; Olsen & Zigler, 1989) believe that too few rigorous research studies have been conducted to be able to answer questions such as those listed above about full vs. half-day kindergarten. I agree with this perspective to some extent. Isn't education a field characterized by weak studies and lack of replication? However, a considerable number of studies, show that there is a difference between full and half-day kindergarten, along dimensions of gains in cognitive development, social skills, reading, and other factors. Caldwell, (1989) shares my viewpoint as she responds to an article by Olsen & Zigler, who claim there is no basis for evaluating full vs. half-day kindergarten:

> ...they want evidence that these increases are "constant across all social class groups" and "maintained over time." They drive a hard data bargain-one that is much more rigorous than is required for the evaluation of achievement in any other grade level. That is, we generally endorse new math curricula for fifth graders if the material and the teaching strategy favorably influence fifth grade math achievement...

## Reviews of Research Studies Comparing Full and Half-Day kindergarten

**Comparing Full-Day and Half-Day Kindergarten. Anderson, E.V. (1984). Technical paper by Orange County Dept. of Education, Costa Mesa, CA.**

In order to study performance of students, parent attitudes, teacher attitudes and other outcomes, groups of children were enrolled in either full or half-day kindergarten. Comparison classes were set up for each of the experimental groups, with about 30 in each class. Subjects taught were noted and verified by classroom observers. "Time on task" by subject was noted by observers for academic and other subjects. Full day classrooms spent more time on task for reading, even though students spent 90 min. instead of 40 minutes studying reading. The percentage of time on task for math was the same for both groups. No evidence of fatigue was noted for classes in either group. A standardized test battery was administered at the end of the school year and raw scores were higher in all cases for full-day classes. However, no statistical tests were completed on scores, so some of the score differences between groups may be due to chance. A parent attitude survey showed differences in parents' attitudes about their child's success between the two groups, with a higher percentage of parents of the full-day group indicating their children succeeded in areas such as "self confidence", "independence", and "academic learning". Teachers were very positive about full-day kindergarten and believed it fostered greater independence, increased communication.

There are several limitations to this study, including small sample size (about 120 students total), and short duration (1 year). Further, pre-testing which was completed was not used as a measure of program success or failure. However, some of the strengths of this study include measuring learning with normed tests, situating observers in classrooms, matching "comparison" classes on several student attributes, and assessing the program based on parent information, teacher information, and student information. This study shows that added time to the kindergarten day did not cause fatigue; indeed, student academic achievement most likely improved, and parents and teachers believed the program was better for children. A final note is that half-day kindergarten classes had better support personnel, with a full-time, paid aide assigned to each classroom, so in this respect the half-day group was favored.

**The Long Term Effects of Title I Preschool and All-Day Kindergarten. Nieman, R.H. & Gastright, J.F. (1981).** ***Phi Delta Kappan.***

This longitudinal study compared 551 students in two groups: half-day kindergarten and full-day kindergarten. All students were pre-tested with a locally developed instrument, and tested again a few months later with Boehm Test of Basic Concepts (others additionally with Metropolitan Readiness Test or "MRT"). Initially there was no difference between the two groups but after 3 months of kindergarten the all-day groups scored significantly[1] higher than their counterparts on Boehm's Test. The MRT scores showed "extreme" differences in favor of the all day group. In 1975, while the children were in the fourth grade, the Metropolitan Achievement Test was administered and results showed that the all-day group had significantly higher scores than the comparison group. The same testing was repeated when the cohort was in the eighth grade with similar results: students in the experimental group outscored their counterparts who had attended half-day kindergarten years before. Naturally, there was attrition in the two groups, but that is expected in a longitudinal study. Differences were also noted between the groups based on number of students retained and in number of students assigned to special education classes, in both cases favoring the full-day group. However, according to results from pre-testing, combined scores between the two groups was not different at the start of the project.

It is unknown if adjustments were made during sample selection for SES, although incipient testing showed no differences between groups. One major flaw in this study is that the majority of students in the all-day group were enrolled in preschool as 4-year-olds.

**Kindergarten Programs and Practices. ERS Staff Report, 1986.** ***ERS Spectrum,*** **Vol. IV, No. 2.**

This report summarizes research by ERS which involved survey data from 1228 principals and 1082 teachers nation wide. Of then "current" full-day kindergarten teachers 66% prefer full-day, and 11% preferred full-day "alternate" days, for a total of 77% preferring full-day over half-day. Survey respondents identified their programs as focusing on academics or "preparation" for academics. For these two groups, 91% of academically-focused programs and 94% of preparation-focused kindergarten teachers thought language development was a high priority goal. As would be expected, academically-focused programs thought academic achievement (59%) was a priority, versus the preparation group which thought academic achievement was less important (36%).

What were some of the major problems with full and -half day kindergartens, as reported by teachers? The primary problem for teachers of both groups was "lack of time for individual instruction/guidance", for 61% of half-day teachers and 53% for full-day teachers. A second major problem for kindergarten teachers was "limited time for enrichment activities" and there was a difference in the nature of responses, based on group affiliation; full day teachers stated this was a problem 26% of the time, with one-half day teachers indicating it was a problem 46% of the time.

In summary, this article helps to show some of the attitudes of a large group of full and -half day kindergarten teachers. Probably the single most interesting result is the large difference in responses for full-day teachers and half day teachers on whether they have enough time for enrichment activities. This result suggests that full-day kindergarten potentially provides for an opportunity for teaching to certain subjects without interruption.

**Full-Day Kindergarten as a Treatment for At-Risk Students: Ohio County Schools, (1988). Jones, L.H., Pollock, B. and Marockie, H.**

In a fairly small study (n=60 students) full vs. half-day kindergarten was studied for children identified by their teachers as "at risk" of academic failure. A pre-test, post-test design was used. Results show significant differences on mean scores between the two groups, based on difference in pre-test to post-test scores, favoring full-day kindergarten, in two subject areas: "cognitive maturity" and "physical maturity".

Although this study suggests that at-risk children can be helped through full-day kindergarten it must be noted that the instruments used to measure learning were developed by the district, and were not normed, checked for reliability or for validity.

**Why We Went Back to Half Days. (1984). Robertson, L.F. *Principal.***

This paper reports on research in Ohio with about 200 children over a period of 1 school year. In this study a variant of full and half-day research was conducted, in that students in one group attended full-day kindergarten *every other day*, compared with a group of student attending half-day *every* day. There was no data about how students were assigned to the study, or about whole class selection. A pre-test of academic progress was given to students, along with a test of social skills, and a test of developmental level. At the conclusion of the study students were tested with the same three instruments. Statistical results of scores show no differences in academic learning, social skills or developmental readiness.

The title of this article is misleading because one is led to think that the school had a program of half-day kindergarten, tried full-day and went back to half-day kindergarten. As noted above, this is not the case; the school experimented with an alternate form of full-day, by offering class every other day. So, this study is not truly a study of full-vs.-half day kindergarten. Obviously, for children this young one would expect that students might forget a lot of material after a day of being at home. Some parents demanded a stop to the alternating schedule but the majority actually preferred the full-day, alternating schedule according to a survey. It is important to note that even with the (I believe) terrific handicap of attending class every other day, there was no difference in learning, socialization or development between the 2 groups. This attests to the possible strength of full-day kindergarten. What really would have resulted in a good study is if the researchers had designated a third group of students, with a third group receiving full-day every day.

**A Study of the Effectiveness of Full Day Kindergarten. Humphrey, J.W. (1980). Evansville, IN: Evansville-Vanderburgh School Corp. (ERIC Document Reproduction Service, No. ED 190 224)**

This study is probably considered to be the most important research project relating to full vs. one-half day kindergarten. The sample size is fairly large, several measures of learning are used, and students were tested longitudinally.

Four schools were used as an experimental group, in which full-day kindergarten was offered, and a comparison group of half-day students was arranged, using random assignment. Students were matched on socio-economic factors. Control group students were further selected based on a morning and afternoon class affiliation to control for possible morning vs. afternoon effects. Students were pre-tested and post-tested on Calif. Achievement Tests, and Gates-MacGinitie Reading Tests. For the full-day only group a test called the Boehm Tests of Basic Concepts was administered on a pre-test/post-test basis. Questionnaires, opinionnaires and interviews data were collected from parents, and teachers. Task observation was completed in classrooms and attendance records were analyzed.

Results show that students in the full-day kindergarten group scored significantly higher on the Gates reading test, when students in this study were re-tested as first graders; only scores for students that did not switch schools were included. Results from CAT tests show significant difference, in favor of the experimental group on all sub-sets and combined scores. Results from the Boehm test indicates that children in the full-day group ranked 40% higher than a (presumably national) norm group. On a parent questionnaire 82% of parents of children in the full-day program said their child had learned a "great deal".

On the same parent survey, for 3 other responses, parents of full-day children indicated that in areas of psychomotor development, cognitive skills, linguistic growth and other areas, parents indicated a much higher rate of learning/development for their children in contrast to the control group parents' responses. A considerable fraction of parents of full-day kindergarten children indicated they would like their child to continue (92%) in full-day kindergarten. The teacher opinionnaires indicated teachers have a favorable attitude about full-day kindergarten but that first grade teachers do not. Full-day teachers did not like the increased work load associated with a longer day. Full-day teachers liked noon meals for their children, and a chance for more complete instruction in academic subjects. No significant difference was found between groups on attendance, suggesting that fatigue was not an issue. Teachers in the study also noted that teaching was more work because planning was required for an entire day instead of for one-half day. Advantages noted by full-day teachers included the opportunity for students to receive a full range of subjects daily, more time to work with children individually, and having the afternoon to reinforce skills taught in the morning.

It is not difficult to understand why this study is so important, and is frequently cited. The research design is good, random assignment to groups was made, along with several adjustments to groups for SES, time of day of instruction, etc. Students were tested several times with multiple measures. Information was collected from teachers and parents and observations of classrooms were made. Measures of basic skills from 2 instruments measured math, reading, language arts, science, and other subject areas and results show that full-day kindergarten produces higher scores (at least within the limitations of this study). A particular reading test indicates that scores were higher for those in full-day kindergarten.

## Papers Reviewing Full versus One-Half Day Kindergarten

**The Case for All-Day Kindergarten. (1984) Herman, B.E.** ***Phi Delta Kappan.***

The author claims that although some research has been completed on the question of half vs. full-day kindergarten the research is inconclusive, due to poor quality of research design, and small sample sizes.

He cites a study with Cincinnati School Dist. in which students had significantly higher reading readiness scores after being in full-day kindergarten. Research by Winter & Klein (1970) found no evidence of fatigue, or waning interest in school. Relating to school replacing the home, a study in 1978 (Hess et al) found that all day kindergarten actually created closer bonds between school and home. Winter & Klein and Alper & Wright (1979) found that parents prefer all day kindergarten due to convenience factors: easier to arrange for children's transportation, baby-sitting, and helps to establish a more consistent routine for child and parent. Herman claims that kindergarten teachers prefer all day kindergarten, and cites two studies (Harris, 1969) and Ross (1976) to support his claim. At a school in Phoenix, Arizona all day vs. half day was studied and students in the full-day achieved higher scores on a normed test (Metropolitan Readiness Test). The author notes that there are few longitudinal studies that look at full vs. half day kindergarten.

**Current Research Perspectives on Full-Day Kindergarten. (1986). Puleo, V.T. *ERS Spectrum*, Vol. 4, No. 4.**

The author reviews research into full vs. half-day kindergarten and finds that much of the research is poorly constructed, incomplete, and not conclusive. The author asserts, however, that full day kindergarten results in gains in academic performance. Not all full-day programs will result in gains, but that planning according to Puleo and execution are required for a successful full-day implementation.

The majority of studies focus on basic skills, such as reading, math and this is where most of the gains are noted. The author cites a review in which the authors claim that significantly different results were found in 8 different studies (Stinard, 1982) favoring full-day kindergarten. Puleo cites a study by McClinton & Topping (1981) that showed significant differences in social-emotional and development effects favoring full-day kindergarten over half-day kindergarten. The author cites studies suggesting that fatigue is not a major factor in full-day kindergarten. Parents and teachers typically favor full-day kindergarten over half-day kindergarten, according to several studies cited. The author refers to one study that attributed enrollment increases to a new full-day kindergarten program. In sum, the gains by full-day kindergarten are in basic skills, social-emotional, and possibly enrollment increases[2].

In reference to the 3rd question above the author claims that not a single research study has provided a cause and effect linkage that helps to answer the question of what parts of a school program contribute to program gains. He adds that present research using "activity structures" to parse out a kindergarten school day's activities may help to answer this question.

Finally, question #4 above is partially answered by referring to Humphrey's study (1984), in which students were tested in grades K, 1, and at the ends of grades 3 and 4. Significant gains in math, reading, self concept, attitudes of students/parents/teachers were realized by full-day kindergarten students. A study by Nieman & Gastright (1975) followed students to the fourth and eight grade and found that they scored statistically higher on measures of reading and math than a control group.

## Summary

Let us revisit the questions posed above about the differences between full and half-day kindergarten. Are there gains noted in studies that compare full vs. half-day kindergarten children? If gains are found, in what subject areas, or skill areas are they discovered? What do longitudinal studies say about enduring gains in full vs. one-half day kindergarten?

### *Are there gains when comparing full versus one-half day kindergarten?*

Answers are sometimes hard to come by in social sciences research, but a few fairly robust studies suggest that there are most likely gains to be found when comparing full and half-day kindergarten. Perhaps the most influential study is Humphrey's (1981) in which a moderate sample size was used, adjustments were made for SES and other factors, random assignment was made to groups, several well-understood instruments were used, and the study encompassed more than one year. As a matter of fact, Humphrey's study should even satisfy critics of research about kindergarten such as Olsen and Zigler (1989) who claim that kindergarten research should account for "social class groups" and be "maintained over time". Humphrey's study accounted for both of these factors. Humphrey's research shows that student scores in full-day kindergarten increased significantly when compared with a control group (half-day) in academic subjects on a complete battery (CAT), a second battery (Boehm) and a reading test (Gates).

A limited study by Anderson (1984) compared full vs. half-day kindergarten and published raw scores that appear to be significantly higher for full-day students, though no statistical analysis was completed. For students at-risk of academic failure research by Jones et al, (1988) shows gains in "cognitive maturity" and "physical maturity" favoring full-day students. One study in Ohio (Robertson, 1984) compared gains in a group of kindergarten children taking full-day kindergarten on alternating days, with children in kindergarten everyday, one-half day. Results from the study indicate no differences in academic learning. However, when one studies Roberstson's research, one may think that alternating days for children of kindergarten age could have potentially severe effects on their ability to learn, due to a changeable schedule, or forgetting what was learned. Even with this possible handicap the group of half-day students did not score higher than their counterparts (full-day, alternating day). A second study shows results similar to Robertson's, and this experiment compared full day, alternating day kindergarten with half-day (Ulrey, et al, 1982). Finally, Puleo (1986) who begins a review paper of full vs. half-day kindergarten by saying that research about day length of kindergarten is inconclusive quickly gives an unqualified "yes" to the question of whether full-day programs produce greater gains.

Very little mention is made of studies of full vs. half-day kindergarten in which gains were in the other direction, favoring half-day. There may be studies available that show greater gains for half-day kindergarten but I could not locate any. A couple of studies show no significant differences between the two types of kindergarten programs on *some* measures (Levison & Lalor, 1986, cited in Olsen and Zigler ) but in no case (that I read of) was the half-day group favored in regards to academic or other gains.

### *In what areas do we find these gains?*

For the most part, researchers studying full vs. half-day kindergarten are interested in academic gains, and most studies report on findings from standardized tests or locally developed tests of cognitive skills. Students in full-day kindergarten have shown gains on standardized tests and other normed tests such as the Metropolitan Readiness Test (Herman, 1984; Alper & Wright reported by Herman; Nieman & Gastright, 1981), the CAT test, Gates-MacGinite Reading Test, Boehm Tests of Basic Concepts (Humphrey, 1981; Nieman & Gastright, 1981), Stanford Early School Achievement Test (Anderson, 1985). Obviously, some of the standardized tests mentioned in this paragraph contain a number of sub-tests, including reading, language arts, mathematics, science, and social studies. One can conclude that gains are found in many subjects, to that extent that standardized tests measure a subject, such as science.

To a lessor degree gains in other areas have also been recorded, such as physical maturity (Jones, 1988). Hess, et al (1978 reported by Herman 1984) measured closer bonds between school and home for full-day kindergarten compared with half-day students. Olsen and Zigler (1989) review several studies in which differential academic gains between SES groups are noted, when full vs. half-day kindergarten studies are conducted, with gains favoring full day groups of lower SES level students. With regard to gains in social skills and personality, but in few (if any) cases do full-day kindergarten children experience do not lower scores on social/personality indices compared with half-day students.

### *Do the gains endure over a student's career?*

There is a dearth of information to answer this question. However, two influential studies were reviewed above: Humphrey (1981) and Nieman and Gastright (1981). Humphrey's work reported gains in academic subjects over time, and through several dimensions including standardized tests, parent/teacher surveys and linguistic, psychomotor gains. In the spring of their first-grade year, two years after the start of the research program students were tested with the Gates test and students in the full-day program had significantly higher scores than the comparison group. Further, parents and teachers strongly supported the new all-day kindergarten classes.

Nieman and Gastright extended their study of two groups of kindergarten children until children were in the fourth and eighth grades. Scores for the full-day group continued to be significantly higher than scores for half-day students on the Metropolitan Achievement Test. Another high point of this study is that fewer students in the all-day group were admitted to special education program than in the contrasting group of students. Further, fewer students were retained in the full day kindergarten group than in the half-day group, as the years progressed. Even though good testing instruments were used, students were tested many years, and a fairly large sample size was used the research design was flawed, in my opinion. The fact that most students in the all-day group had completed a year of preschool in contrast to the second group that had (mostly) not attended preschool may have influenced research outcomes.

## Conclusion

This paper reports on literature about whether full day kindergarten can result in greater learning gains than half-day kindergarten. An abundance of studies exist, some well-designed and some not. Results of studies suggest that full-day kindergarten has the potential to produce learning gains that are *at least* as large, and usually larger than half-day studies. In no case (in this group of studies reviewed) were learning gains smaller for full-day kindergarten. While most experiments resulted in learning gains in terms of basic skills, such as reading, math, and language arts, other areas were also studied. Although some reports indicated no significant differences in gains between the two kindergarten programs, the vast majority of studies report significant gains in basic skills, mostly as measured by standardized tests like the CAT or Metropolitan Readiness Test.

Concerning the enduring nature of gains made by students in full-day kindergarten, two studies in particular show that students in full-day programs continue to score better on normed, standardized instruments in later years. Levinson and Lalor (1986) found that gains for a full day vs. a half-day group were maintained in only a single area (language arts) but not math and reading, after re-testing in the second grade. One study (Nieman & Gastright, 1981) followed a separate group of kindergarten students to the eighth grade, retesting them several times, with results showing that full-day programs resulted in higher scores. There is some indication from the literature that full-day learning gains persist over time, but only a few longitudinal studies exist.

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[1] In this report "significant" has a specific meaning, that of differences arrived at through statistical hypothesis tests.

[2] Enrollment increases were brought about by students enrolled in a public school as their first school and continuing to maintain enrollment there in later years. The alternative route is a kindergartner enrolling in a private school and consequently continuing enrollment there.